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Geochemical Cruise Report SO226/2 RV *Sonne* Chatham Rise Expedition

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14. ABSTRACT
The Naval Research Laboratory contributed to an international research expedition to determine the association of methane (CH_4) hydrate dissociation with pockmark formation on the Chatham Rise (New Zealand) during previous climate cycles. Piston coring and multi-coring was conducted at four locations with different seismic, multibeam, and physical profiles. Prior to SO226, seismic and multibeam data were obtained by the University of Auckland and IFM-Geomar which helped to identify broad study areas. Seismic and multibeam data collected on Leg 1 (SO226-1) helped to identify specific coring locations. These target areas were determined based on the seafloor morphology and seismic data interpretation of shallow sediments. More specifically, coring locations were selected where seismic profiles suggested high vertical CH_4 fluxes to the shallow sediment and at sites that were predicted to have low or nonexistent vertical CH_4 fluxes. Sediment cores were also collected in the same locations for paleogeochemical analyses which will be completed by Helen Neil at National Institute of Water and Atmospheric Research, Ltd. (NIWA) in Wellington, NZ. The final assessment of these sediments will require integration of geophysical, geological, and geochemical data.

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I. Overview

This document reviews NRL's contribution to an international research expedition aboard the RV Sonne (SO226) on the Chatham Rise, off the eastern coast of New Zealand in February 2013. The overall objective of this project is to determine the association of methane (CH_4) hydrate dissociation with pockmark formation on the Chatham Rise during previous climate cycles. NRL participated in Leg 2 of the expedition (SO226-2). The NRL contribution to this project includes the following:

- Paleogeochemical assessment of pockmark formation on the Chatham Rise.
- Comparison of pockmark regions with active flux of deep sediment CH_4 to pockmark sites with no current day CH_4 flux.
- Estimation of present-day CH_4 flux to shallow sediments and its biogeochemical contribution to organic and inorganic carbon pools using stable carbon isotope distributions.
- Natural abundance radiocarbon isotope analysis will be used to assess the past vertical flux of CH_4.
- Assess carbon deposition and redistribution and paleoceanographic conditions using sediment ^{230}Th, ^{210}Pb, and ^{231}Pa.

To address these objectives, piston coring and multi-coring was conducted at four locations with different seismic, multibeam and physical profiles. Prior to SO226, seismic and mutibeam data were obtained by the University of Auckland and IFM-Geomar which helped to identify broad study areas. Seismic and multibeam data collected on Leg 1(SO226-1) helped to identify specific coring locations. These target areas were determined based on the seafloor morphology and seismic data interpretation of shallow sediments. More specifically, coring locations were

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selected in where seismic profiles suggested high vertical CH_4 fluxes to the shallow sediment and at sites that were predicted to have low or non-existent vertical CH_4 fluxes. Sediment cores were also collected in the same locations for paleogeochemical analyses which will be completed by Helen Neil at NIWA in Wellington, NZ. The final assessment of these sediments will require integration of geophysical, geological and geochemical data. A weekly overview of Leg 1(SO226-1) and Leg 2 (SO226-2) is presented in Appendix 1.

II. Introduction

Methane hydrate distribution and abundance are key topics in climate change and alternative energy research. Vast amounts of CH_4, a potent greenhouse gas, are stored in the Earth as ice-like gas hydrates, which are stable at the moderately high pressures and low temperatures typically found close to the seafloor in deepwater sediments. The role of CH_4 hydrates in climate change is poorly understood and there are concerns that changes in sea level and ocean temperature as a result of climate fluctuations may lead to a release of significant amounts of CH_4 from gas hydrates. The result may lead to ocean acidification and potentially accelerate climate change. Gas hydrates in sediments close to the top of gas hydrate stability zone in ocean sediments are predicted to be particularly vulnerable.

While the Arctic is a primary focus for understanding climate change, researchers (New Zealand and Germany) have discovered a >20,000 km^2 region on the southern flank of the Chatham Rise, east of New Zealand, that is covered by seafloor depressions interpreted to be gas-escape features. Parasound sub-bottom profiles show a reflection that may constitute a bottom simulating reflection (BSR) at the base of gas hydrate stability (BGHS) zone, suggesting a link between the pockmarks and gas hydrates. Intriguingly, the Parasound data also reveal buried pockmarks at horizons that appear to mark glaciation peaks. The hypothesis for this

research is that these depressions were formed as a result of CH_4 release from destabilizing hydrates during glacial-interglacial cycles. The estimated amount of CH_4 is substantial, ~7 Tg from one of the largest features (Davy et al., 2010). These findings may constitute the clearest evidence to date linking gas hydrate dissociation and glacial climate fluctuations. Our research plan focuses on studying the response of oceanic gas hydrates to climate fluctuations by investigating the formation mechanisms of these seafloor depressions, their links to destabilizing gas hydrates, and implications for CH_4 release into the ocean and perhaps atmosphere.

This expedition was a collaborative effort between scientists from New Zealand, the USA, and Europe and is a contribution to a funded New Zealand Marsden full research proposal: "Uncorking the hydrate bottle: Release of CH_4 from melting gas hydrates during glacial cycles on the Chatham Rise, New Zealand" with Dr. Ingo Pecher as the Principal Investigator. Geochemical analysis of shallow sediment will assist in the interpretation of seismic data across Chatham Rise pockmarks to determine of the influence of climate change on CH_4 hydrate stability and subsequent vertical gas migration. Interpretation of geophysical, geologic and geochemical data focused on the CH_4 flux during the past interglacial period. Assessment beyond this period will depend on the sedimentation rates measured at the 4 coring locations.

III. Site Description

This study compares three areas on the Chatham Rise east of New Zealand (Figure 1). This location was selected based on a survey of a 20,000 km^2 region on the southern flank of the Rise that is covered by seafloor depressions that were interpreted as gas-escape features (Davy et al., 2010). In that study, three classes of seafloor depressions were observed: 1) sub-circular features that resemble typical pockmarks, ~ 150 m across and up to 8 m deep in water depths of 500-700 m, 2) Irregular depressions up to 5 km across and 150 m deep located in water depths of 800-1100 m and 3) shallower pockmarks close to the current top of the gas hydrate stability (TGHS) zone in water column depths of ~ 550 m. At this location parasound sub-bottom profiles suggested a reflection that may constitute a bottom simulating reflection (BSR) at the base of gas hydrate stability (BGHS) which was interpreted to be a link between the pockmarks and gas hydrates. Parasound data also revealed buried pockmarks at horizons that coincided with glaciation peaks (Davy et al., 2010). Core site were selected based on findings from this survey, a review of currently available geophysical data as well as seismic an multi-beam profiles generated on this expedition. BSRs, that would indicate the BGHS, were not observed in any of the profiles. The selection of core sites was based on seismic reflections suggesting high sedimentation, sediment focusing and scouring, and sites showing evidence of vertical fluid migration.

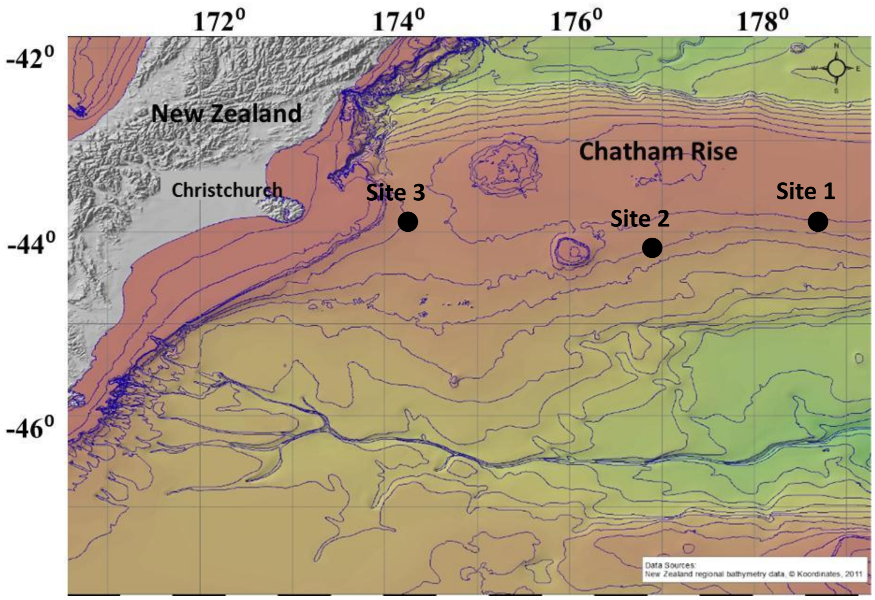


Figure 1: Coring locations during SO226/2 in February 2013 on the Chatham Rise, off the eastern coast of New Zealand.

IV. Participants

The following table lists the NRL geochemistry team and their roles during this expedition (Table 1). New Zealand and German researchers also provided assistance to the core and sample processing activities.

Table 1: NRL geochemistry team.

Name	Affiliation	Role
Richard B. Coffin	NRL-Code 6114	Co-chief scientist, lead geochemist
Paula S. Rose	NRL-NRC-Code 6114	Lead core processing, geochemist
Thomas J. Boyd	NRL-Code 6114	Co-lead analytical lab, biogeochemisty
Brandon Yoza	U. Hawaii, HNEI	Lead pore water sampling, microbiologist
Lewis C. Millholland	NRL-SAIC-Code 6114	Co-lead analytical lab, chemist
Santiago Carrizosa	Navy Reserve/ONR	General lab and deck support
Michael Knies	NRL-SAIC-Code 6114	General lab assistance
Ross Downer	Milbar-Hydrotest Inc.	Lead coring operations
Stan Woods	Milbar-Hydrotest Inc.	Coring operations
Gregory Lovelace	Milbar-Hydrotest Inc.	Coring operations

V. Methods

A. *Radiocarbon Natural Abundance Analysis* – Background radiocarbon wipe tests were conducted to determine levels of radiocarbon present in the work areas. Wipe tests were done in different shipboard laboratories, work and storage areas and in the NRL portable lab van (Table 4). Pre-combusted Whatmann QMA filters (25 mm diameter) were soaked in isopropanol and wiped on an area ~ 1 m^2 at each location. At the GNS radioisotope laboratory, the filters were folded and placed in combustion tube with carrier after drying in vacuum oven. CO_2 was generated by sealed tube combustion tube. Sample and data processing are described by Stuiver and Polach (1977). The blank corrected, fraction modern was normalized to $\delta^{13}C = -25‰$ defined by Donahue et al. (1990).

B. *Coring* – Coring operations included sediment piston coring and multi-coring.

Figure 2: Cable termination on the ship's coaxial cable for piston coring lead by Ross Downer (Milbar-Hydrotest Inc.).

1. *Piston Core Installation and Operations* – For piston core cable termination, an Electroline ME200 termination was used and tested on deck for a 10,000 pound pull (Figure 2). Re-termination was conducted 4 times while at sea, after losing a piston corer and after kinking the cable during retrieval operations.

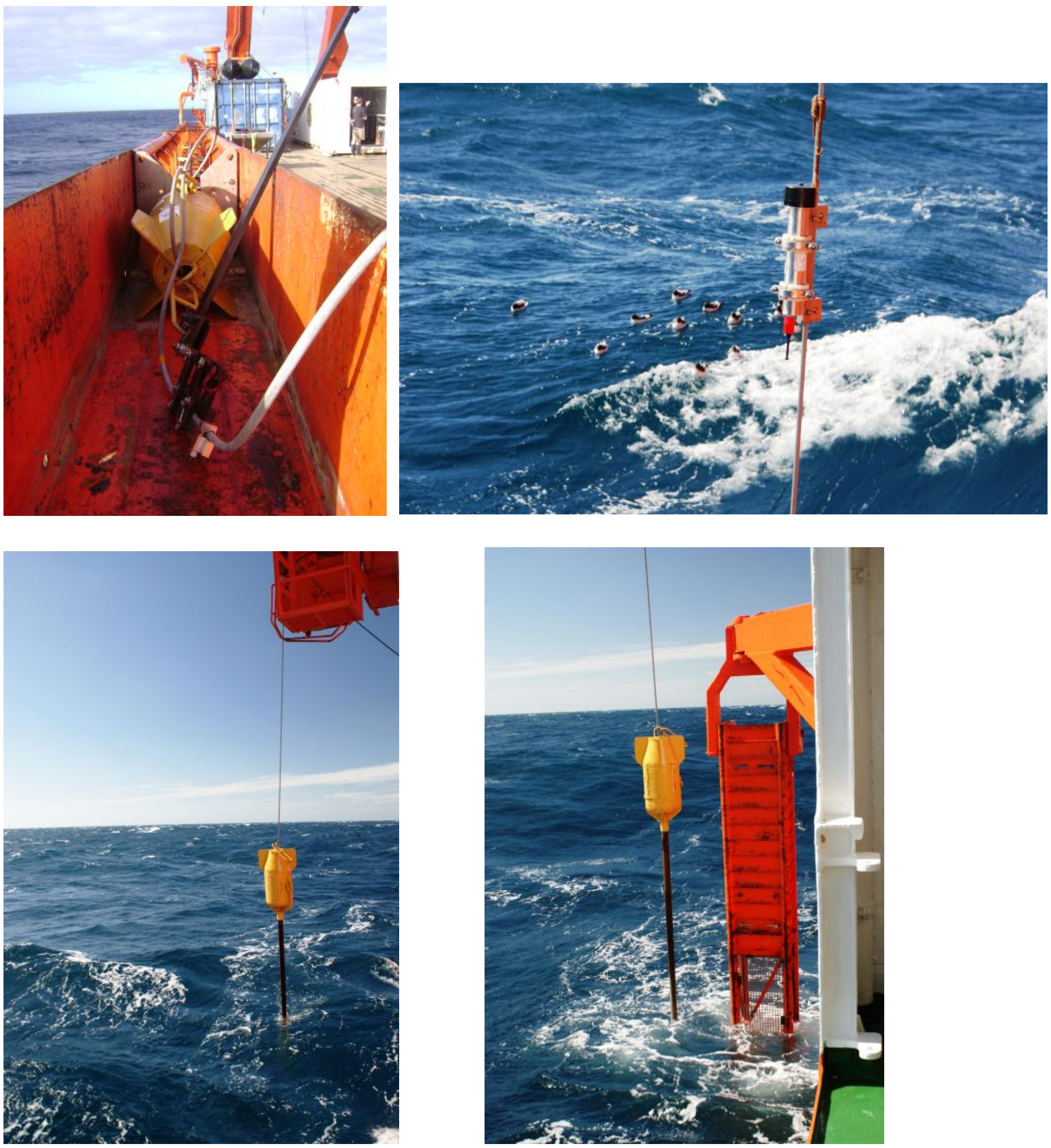


Figure 3: Piston coring conducted off the starboard delivery platform. Core location was monitored with a wire mounted transponder.

Piston coring was conducted using a 1400 kg head weight with a changeable pipe assembly for 6 and 9 m cores (Figure 3). The barrels used for coring were N90 high strength alloy, which allows the barrels to bend 45^0 before breaking. Core liners were 7.3 cm OD x 6.7 cm ID x 305 cm L and composed of cellulose acetate butyrate . The trigger arm was equipped with a 68 kg weight and set for a 4 m drop. The 9 m barrels were used for the majority of the deployments. Coring locations, date and time of collection are presented in Appendix 2.

2. *Multi-corer* – An 8 barrel multi-corer was provided by NIWA for the expedition (Figure 4). Four barrels were used for each deployment. This coring system was used to obtain surface sediment cores for preliminary site assessment and to obtain surface sediments. The cores obtained were between 8 and 42 cm long and were sectioned at 1 cm intervals. Sediment samples were collected for for determination of : 1) porosity, 2) carbon and nitrogen concentrations and stable isotope abundance, 3) ^{230}Th and ^{231}Pa, 4) ^{14}C and 5) ^{210}Pb (at selected sites). All sediment samples were stored frozen for return to NRL.

3. *Piston Core Processing* – Piston cores were measured and visually examined to observe the core characteristics and determine sections to cut for pore water and sediment sampling (Figure 5). Each core was split into ~ 25 sections at 10-40 cm intervals and capped. Sediment samples were collected from each section for determination of: 1) porosity, 2) carbon and nitrogen concentrations and stable isotope abundance, 3) ^{210}Pb, ^{230}Th, ^{231}Pa, 4) ^{14}C and 5) sediment CH_4 (described below). Sediment CH_4 samples were refrigerated until analysis. All other samples were stored frozen for return to NRL.

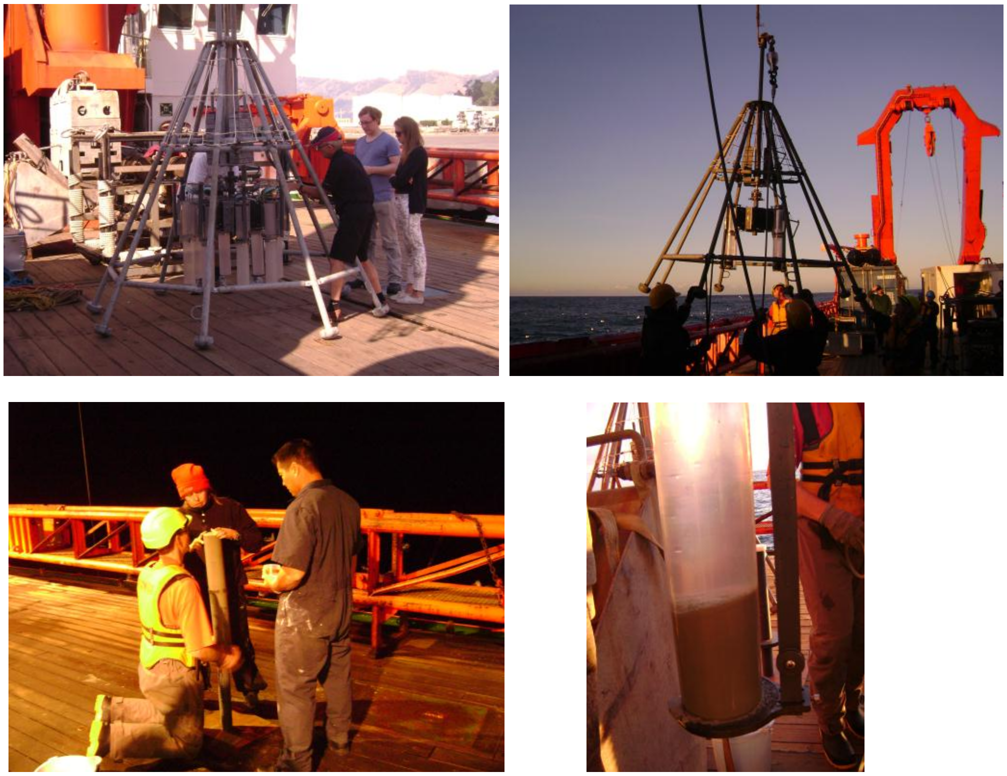


Figure 4: Multi-corer provided by NIWA. Core deployment and sectioning.

In the portable lab van, pore water was extracted from each section using rhizon samplers (Dickens et al. 2007; Seeberg-Elverfeldt et al. 2005). A hole was drilled into the core liner at the approximate center of the each section. A pre-wetted rhizon sampler (Rhizosphere CCS 19.21.23F; nominal pre size = 0.15 μm; dead volume = 0.140 mL) was inserted into each section with a 3-way stopcock and syringe assembly attached to the end (Figure 6). Pore water was collected for the following:

1) sulfide concentration: 3 plastic vials (1.0 mL, 0.25 mL and 0.025 mL sample + 0.5 mL 0.05 M zinc acetate); stored frozen

2) SO_4^{2} and Cl^{-} concentration : 2 mL sample + 0.1 mL 0.8 M cadmium nitrate in plastic vial; refrigerated until analysis

Figure 5. Piston core processing table on deck.

3) DIC concentration: 2 mL sample + 0.5 mL saturated copper solution in a 5 mL precombusted glass serum vial, sealed with a Teflon-coated septum and aluminum cap; refrigerated until analysis

4) $\delta^{13}C_{DIC:}$ 2 mL sample in a 2 mL precombusted glass serum vial sealed with an aluminum cap and Teflon septa; stored frozen

5) $\delta^{13}C_{DOC}$ and DOC concentration: 2 mL sample in 4 mL precombusted screwcap glass vial; stored frozen

6) archive: up to 4 mL sample in 4 mL glass screwcap vials; stored frozen

Figure 6: Pore water sampling using Rhizon samplers and distribution of samples.

C. *On board laboratory analysis*

1. *Pore water sulfate and chloride* - Samples were diluted 1:50 (vol/vol) and sulfate (SO_4^{2}) and chloride (Cl^-) concentrations were measured with a Dionex DX-120 ion chromatograph (Figure 7) equipped with an AS-9HC column and checked against a 1:50 diluted IAPSO seawater standard (28.9 mM SO_4^{2-}, 559 mM Cl^-). Sulfate and Cl^- concentrations are presented in millimolar units (mM). Limits of detection are <0.1 mM.

2. *Dissolved inorganic carbon*- Dissolved inorganic carbon (DIC) concentrations were measured using a UIC coulometer (Figure 8) and standardized against a certified reference material (CRM, Batch 58). DIC concentrations are presented in mM.

3. *Sediment methane* – Three mL sediment plugs were removed from each core section using a syringe with the end cut off. The sediment plug was placed in a 20 mL serum vial,

sealed with a septum stopper and aluminum cap and refrigerated until analysis. To extract the sediment CH_4, 3 mL of DI water was added to the sample using a syringe and shaken for 3 min. Three mL of headpace was drawn out of the vial using a syringe. Methane concentrations were determined on the headspace gas using a GC-FID Shimadzu GC-14A gas chromatograph (Figure 9) equipped with a Hayesep 0.80/100 column and quantified against certified gas standards (Scott Gas, Plumbsteadville PA). Methane concentrations are presented in parts per million (ppm). Samples were frozen after analysis for return to NRL.

Figure 7: Dionex DX-120 ion chromatograph in the shipboard lab.

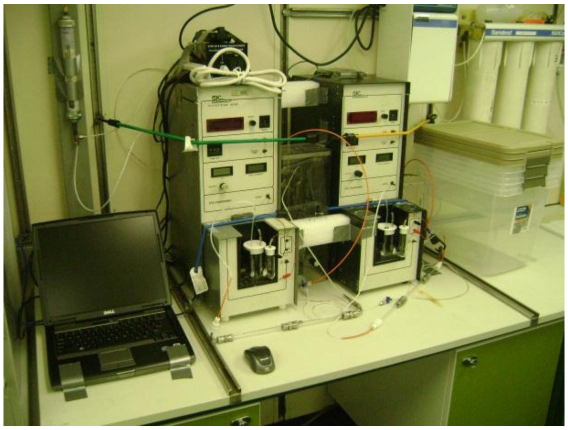
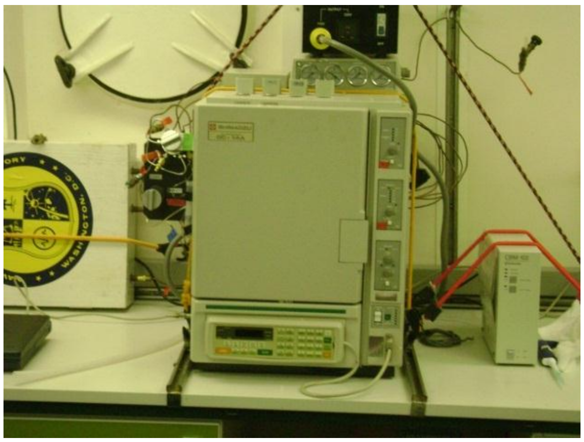


Figure 8: UIC coulometer in the shipboard lab.

Figure 9: GC-FID Shimadzu GC-14A gas chromatograph in the shipboard lab.



VI. Initial Results

This research expedition focused on pockmarks in three different areas of the Chatham Rise (Site 1, Site 2, Site 3) with the intention of studying past and currently active vertical CH_4 migration and the contribution to shallow sediment carbon cycling (Figure 1; Table 2). Data presented in this report is a summary of the analyses completed onboard. Results are intended to organize the selection of samples for radiocarbon, stable carbon and radioisotopes (^{230}Th, ^{210}Pb, and ^{231}Pa) to date (~20,000 years back) vertical CH_4 fluxes and subsequent shallow sediment carbon cycling. Data presented in this report includes Cl^- to assess CH_4 hydrate dissociation in cores, or vertical and horizontal transport of pore water. Sulfate, CH_4 and DIC were reviewed to provide estimate of current day vertical gas fluxes. Sediment CH_4 was at near the limits of detection in all cores, measured concentrations are presented in Appendix 3 and are not discussed in this text.

Table 2: Piston core site locations and general coring information. Not all of the cores listed are presented in this report. Early cores were for system testing and late cores were lost due to sea floor characteristics.

Core Log

Total # of Cores:	*37*	*Total Length of Core Retrieved (meters):*			*154.95*								
Core Number	**Date** *UTC*	**Time at Trigger** *UTC*	**Transponder Latitude**	**Transponder Longitude**	**Water Depth** *Meters*	**Cable Out at Time of Trigger** *Meters*	**Est. Max Tension on Pullout** *kiloNewtons*	**Core Length** *Meters*	**Notes**	**Water Depth - Cable Out at Trigger**	**Percent Recovery**	**Estimated Core Length**	**Est. Max Tension on Pullout** *Pounds*
30-2-PC9	10-Feb-13	22:45	44° 6.03 S	178° 39.99 E	873	854	56.6	5.74		19	63.78%	5.21	12,724
33-1-PC9	13-Feb-13	2:30	44° 5.72' S	178° 31.25 E	899	884	63.1	3.05		15	33.89%	5.01	14,186
33-2-PC9	13-Feb-13	4:30	44° 5.72' S	178° 31.26 E	900		87	4.2			46.67%	4.25	19,558
33-3-PC6	13-Feb-13	6:30	44° 5.73 S	178° 31.2 E	900		75.7	4.07			67.83%	4.61	17,018
34-1-PC6	13-Feb-13	8:38	44° 5.69 S	178° 32.30 E	976	963	152	0	Whole assembly stuck, snapped cable. Lost bomb, 3 stands of pipe, tip, and piston	13	0.00%	2.20	34,171
44-1-PC9	14-Feb-13	21:38	43° 58.85 S	178° 48.88 E	680	661	41.1	6.04		19	67.11%	5.70	9,240
45-1-PC9	15-Feb-13	0:06	43° 58.86 S	178° 47.57 E	749	732	35.9	6.71		17	74.56%	5.86	8,071
45-2-PC9	15-Feb-13	2:40	43° 58.81 S	178° 47.63 E	743	729	38.7	6.86		14	76.22%	5.78	8,700
46-1-PC9	15-Feb-13	4:29	43° 58.90 S	178° 46.95 E	810	798	26.2	0	Broke off 3rd barrel, No recovery	12	0.00%	6.17	5,890
47-1-PC9	15-Feb-13	6:50	43° 58.91 S	178° 46.74 E	825	807	28	0	Broke off 3rd barrel, No recovery	18	0.00%	6.11	6,295
51-2-PC9	15-Feb-13	16:46	43° 58.20 S	178° 46.82 E	770	750	47.6	6.48		20	72.00%	5.50	10,701
52-1-PC9	15-Feb-13	19:49	43° 57.94 S	178° 47.61 E	702	686	41.7	6.42		16	71.33%	5.68	9,375
53-1-PC9	15-Feb-13	22:09	43° 58.70 S	178° 47.89 E	736	713	32.1	6.15	Top section of core liner stuck in barrel	23	68.33%	5.99	7,216
54-1-PC9	16-Feb-13	0:29	43° 58.89 S	178° 47.22 E	785	766	49.4	6.6		19	73.33%	5.44	11,106
57-1-GC3	16-Feb-13	22:30	43° 56.915 S	178° 35.122 E	631	628	41.7	1.87		3	62.33%	5.68	9,375
58-1-GC3	17-Feb-13	0:50	43° 5.997 S	178° 31.52 E	906	906	32.1	0	No recovery, very sandy	0	0.00%	5.99	7,216
59-1-GC3	17-Feb-13	2:42	44° 7.603 S	178° 36.224 E	928	921	35.7	0	No recovery, very sandy	7	0.00%	5.87	8,026
60-1-GC3	17-Feb-13	4:33	44° 11.239 S	178° 36.338 E	1035	1030	26.2	0	No recovery, very sandy	5	0.00%	6.17	5,890
73-2-PC9	20-Feb-13	15:03	44° 14.37 S	177° 8.47 E	964	944	49.4	6.41		20	71.22%	5.44	11,106
74-1-PC9	20-Feb-13	17:02	44° 14.37 S	177° 8.55 E	960	943	46.4	6.07		17	67.44%	5.53	10,431
75-1-PC9	20-Feb-13	19:38	44° 14.37 S	177° 9.07 E	968	94	31.5			874		6.00	7,082
75-2-PC9	20-Feb-13	21:33	44° 14.39 S	177° 8.97 E	968	949	38.1	6.65		19	73.89%	5.80	8,565
76-1-PC9	21-Feb-13	0:04	44° 14.37 S	177° 10.41 E	970	948	44.7	5.89		22	65.44%	5.59	10,049
76-2-PC9	21-Feb-13	2:03	44° 14.36 S	177° 10.41 E	970	947	39.9	6.48		23	72.00%	5.74	8,970
77-1-PC9	21-Feb-13	4:05	44° 14.36 S	177° 11.16 E	940	919	39.3	6.53		21	72.56%	5.76	8,835
77-2-PC9	21-Feb-13	6:14	44° 14.37 S	177° 11.17 E	936	919	46.6	6.28		17	69.78%	5.53	10,476
77-3-PC9	21-Feb-13	7:56	44° 14.37 S	177° 11.17 E	936	918	38.1			18		5.80	8,565
82-3-PC9	21-Feb-13	21:05	44° 18.49 S	177° 2.37 E	1023	1002	33.9	6.25		21	69.44%	5.93	7,621
83-1-PC9	21-Feb-13	22:51	44° 18.35 S	177° 2.50 E	1013	999	46.4	6.38		14	70.89%	5.53	10,431
84-1-PC9	22-Feb-13	0:52	44° 18.26 S	177° 2.59 E	1019	999	48.2	6.64		20	73.78%	5.48	10,836
85-1-PC9	22-Feb-13	3:01	44° 17.48 S	177° 3.42 E	975	955	34.5			20		5.91	7,756
85-2-PC9	22-Feb-13	5:42	44° 17.54 S	177° 3.43 E	975	954	40.5			21		5.72	9,105
94-3-PC9	25-Feb-13	16:55	43° 59.43 S	174° 28.05 E	569	554	35.7	4.4	Shot 1916 - Paleo core	15	48.89%	5.87	8,026
94-4-PC9	25-Feb-13	19:16	43° 59.44 S	174° 28.04 E	569	554	32.7	6.15	Shot 1916 Geotech core	15	68.33%	5.97	7,351
94-5-PC9	25-Feb-13	20:39	43° 59.43 S	174° 28.09 E	569	553	35.7	6.57	Shot 1916 - Geochem core	16	73.00%	5.87	8,026
95-1-PC9	25-Feb-13	22:05	43° 59.26 S	174° 27.93 E	568	553	31.5	4.27	Shot 2155	15	47.44%	6.00	7,082
96-1-PC9	26-Feb-13	0:05	43° 59.24 S	174° 27.92 E	569	557	35.7	5.79		12	64.33%	5.87	8,026
97-1-PC9	26-Feb-13	1:25	43° 59.17 S	174° 27.86 E	569	554	30.4	4.28		15	47.56%	6.04	6,834
98-1-PC9	26-Feb-13	3:08	44° 0.13 S	174° 28.63 E	571	568	46.4	2.41	Shot 964 - Geotech core	3	26.78%	5.53	10,431
98-2-PC9	26-Feb-13	4:32	44° 0.12 S	174° 28.64 E	571	561	53	5.85	Station Name on Display showed 98, not 98/2	10	65.00%	5.32	11,915
99-1-PC9	26-Feb-13	6:30	43° 58.95 S	174° 27.68 E	575	560	28	0	Broke off 3rd barrel, No recovery	15	0.00%	6.11	6,295
100-1-PC9	26-Feb-13	8:12	43° 58.85 S	174° 27.59 E	568	554	30.4		Imploded middle core liner	14		6.04	6,834
101-1-PC9	26-Feb-13	10:05	44° 1.17 S	174° 27.06 E	572	557	23.8		Bent third barrel	15		6.25	5,350

A. *Site 1*

Core site 1 is located northeast of a series of pockmarks on the Chatham Rise at water depths that range from 686 to 807 meters (Figure 10). Sediment characteristics and the need to obtain cores at least 4 meters deep for age dating resulted in the selection of coring sites to the east of the pockmarks. Sand to gravel and chalk sediment to the west resulted in losing one piston corer and breaking two core barrels. After difficulties with piston coring, multi-coring was used to assess the potential to retrieve deep piston cores. Multi-core samples are also used to obtain modern data sediment to assess the current sedimentation rate relative to the vertical CH_4 flux.

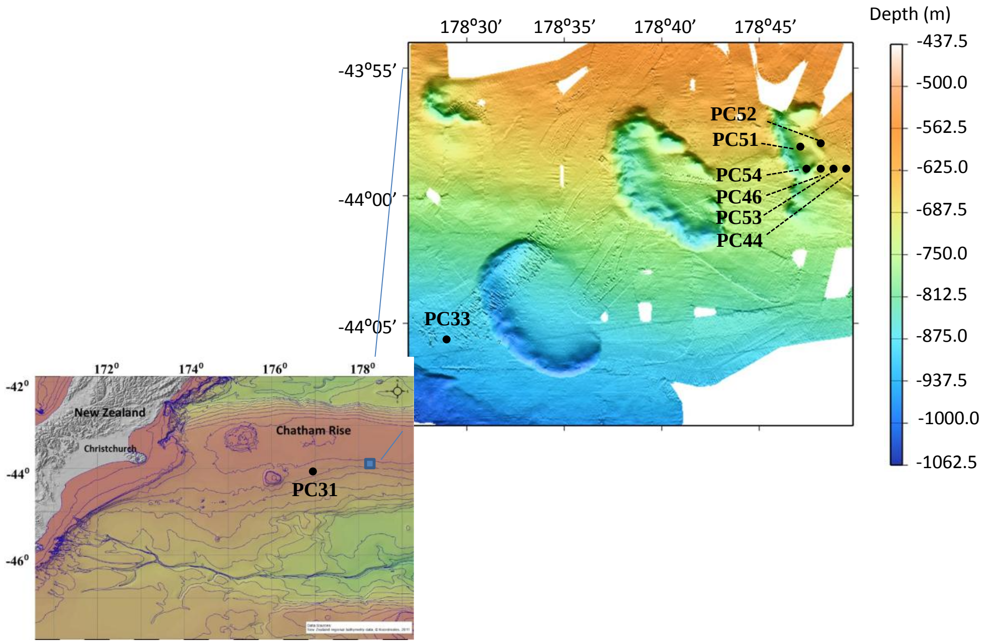


Figure 10: Site 1 coring locations on the eastern side of the pockmark. Control cores (PC31 and PC33, not presented in this report) are also shown off the pockmark.

Seismic data from Site 1 was suggested modern vertical gas migration (Figure 12). PC54, PC45, PC53 and PC44 were taken on the south eastern side of Site 1. Line P6110 was selected due to deep reflection patterns indicative of and strong shallow seismic reflections

suggesting soft sediment (Figure 11). This feature was also observed in a northern seismic line (P6112), where two core locations (PC51 and PC52) were selected to assess the extent of this feature (Figure 12).

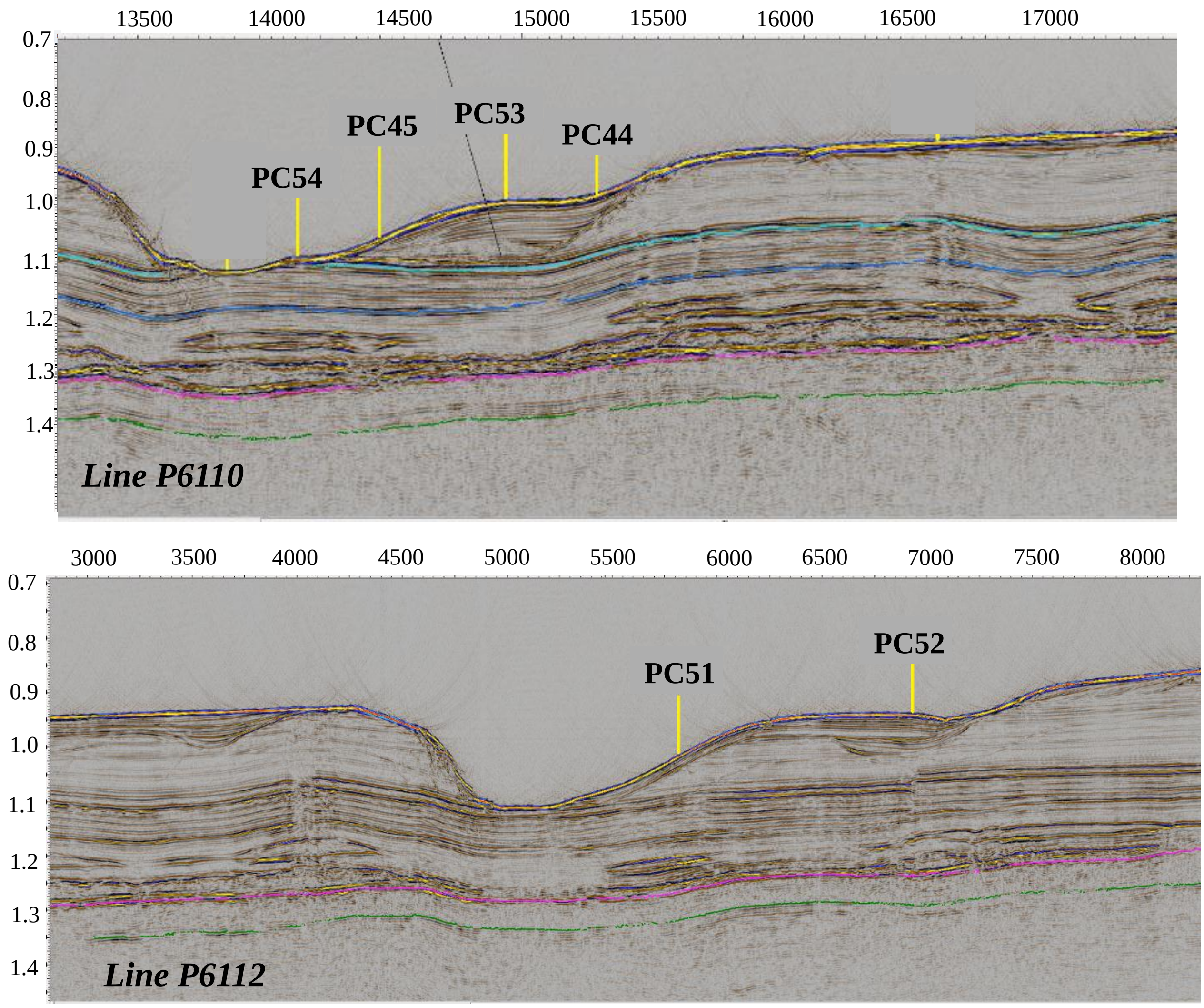


Figure 11: Seismic lines for the Site 1 pockmark. Core sites were located on the eastern side of the pockmark because cores could not be retrieved at western locations.

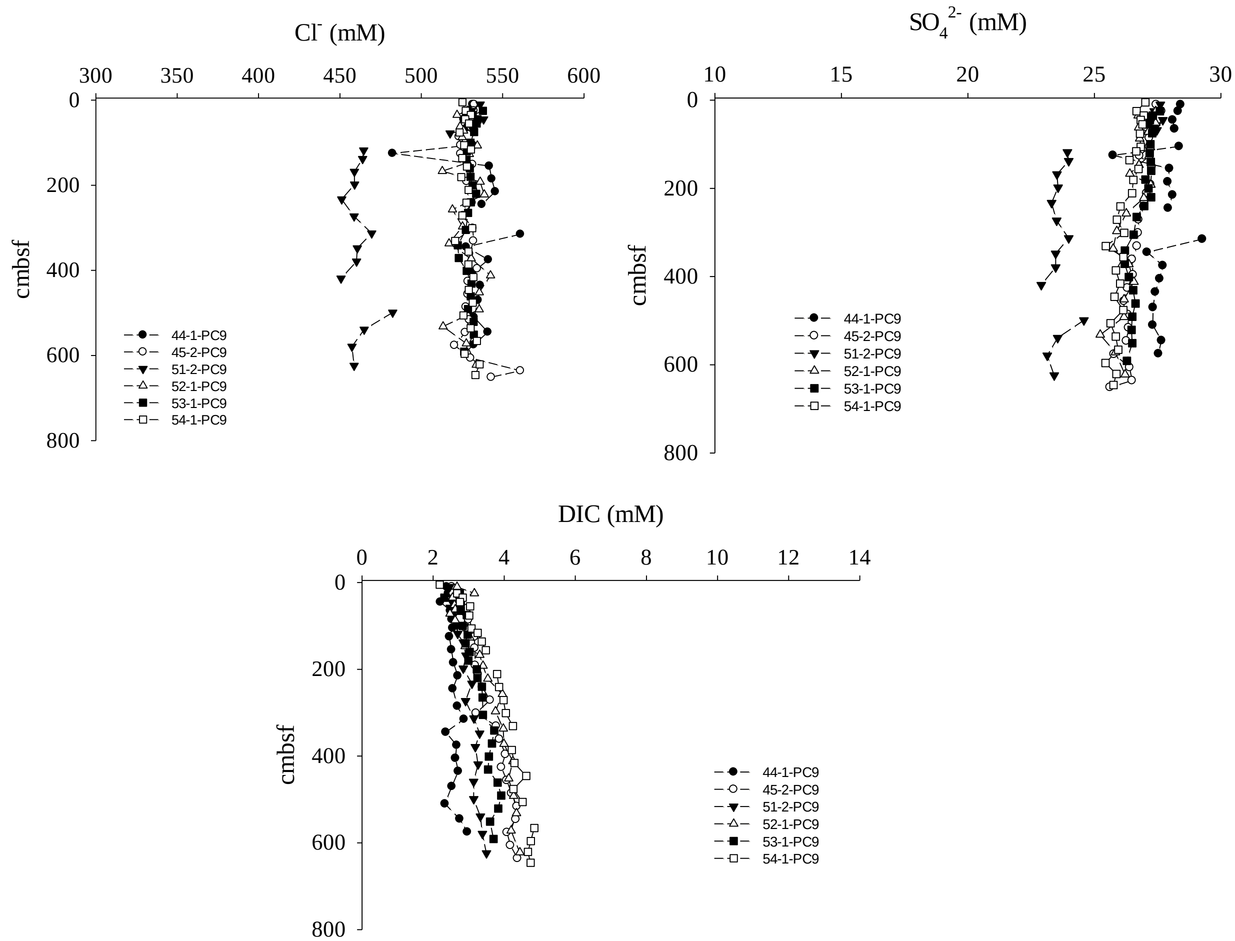


Figure 12: Pore water SO_4^{2-}, Cl^- and DIC profiles in cores from the eastern side of the pockmark at Site 1.

Geochemical evaluation of the eastern lines across the site 1 pockmark found low background sediment CH_4 and no higher molecular weight gases (Appendix 3). Data presented for the field assessment of the core pore water includes SO_4^{2-}, Cl^-, and DIC (Figure 12). The range in SO_4^{2-} concentrations at this location was 22.9 to 29.2 mM. The general trend for SO_4^{2-} profiles at all locations in this region is moderate to no decrease in concentration with depth. The linear trend in the SO_4^{2-} profiles, with no rapid depletion in the shallow sediment characteristic of labile organoclastic cycling, could suggest anaerobic oxidation of CH_4 (AOM) is responsible for the decline in concentration. However, sediment CH_4 concentrations through the cores were

slightly above the limits of detection and indicate that AOM was beyond the core penetration depth. Laboratory analyses of $\delta^{13}C_{DIC}$ and sulfide concentrations will be measured to assess AOM. Chloride concentrations for cores near the Site 1 pockmark ranged from 451 to 543 mM (Figure 13). Generally, the Cl^- profiles were relatively constant with depth and concentrations were near seawater values. However, Cl^- in PC51 was observed to be lower through the entire core and decline to the minimum observed value at depth. Another general observation of the Cl^- profiles was a the similarity to the SO_4^{2-} profiles, suggesting low SO_4^{2-} cycling, assuming Cl^- is a conservative tracer (Figure 12). Pore water DIC concentrations ranged from 2.1 to 5.2 mM with shallow sediment concentrations consistently near the seawater concentration with gradual increases observed down core. PC54 was observed to have the highest DIC concentration toward the bottom of the core. This inverse relationship could indicate low AOM or organoclastic SO_4^{2-}reduction through the core.

B. *Site 2*

Site 2 was located south of Site 1 in water depths ranging from ~ 1000 to 1100 m (Figure 13). In this area, there were two coring locations: Site 2-A (Seismic Line 7114, Figure 14) and Site 2-B (Seismic Line 7109, Figure 14). Selection of core these sites was based on seismic profiles interpreted to show shallow sediment accumulation and vertical fluid fluxes. Pore water SO_4^{2-} and DIC concentrations in the cores ranged from 17.1 to 27.6 mM and 1.3 to 12.1 mM, respectively. PC75 was observed to have the greatest decrease in SO_4^{2-} and increase of DIC concentration suggesting AOM or organoclastic SO_4^{2-} reduction (Figure 15). In Site 2-A cores, pore water Cl^- concentrations ranged from 489.7 to 540.1 mM. In general, profiles were conservative with no vertical patterns; however, there were a couple of points with lower concentrations (Figure 15).

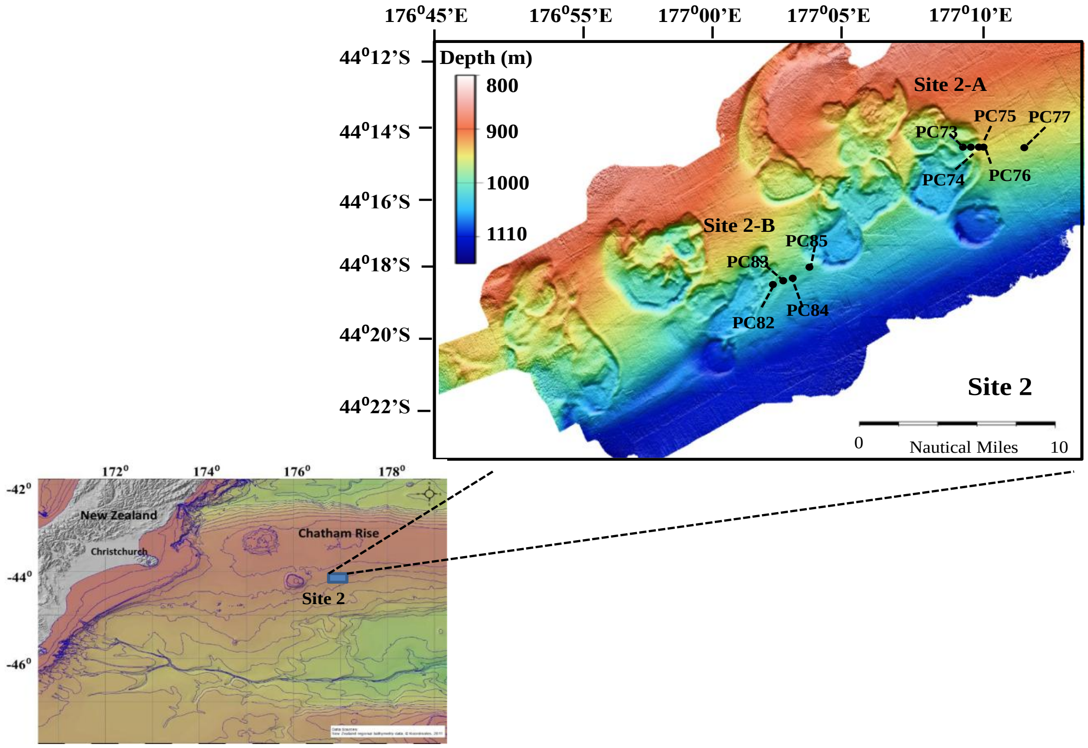


Figure 13: Location of coring Site 2-A and 2-B on the Chatham Rise.

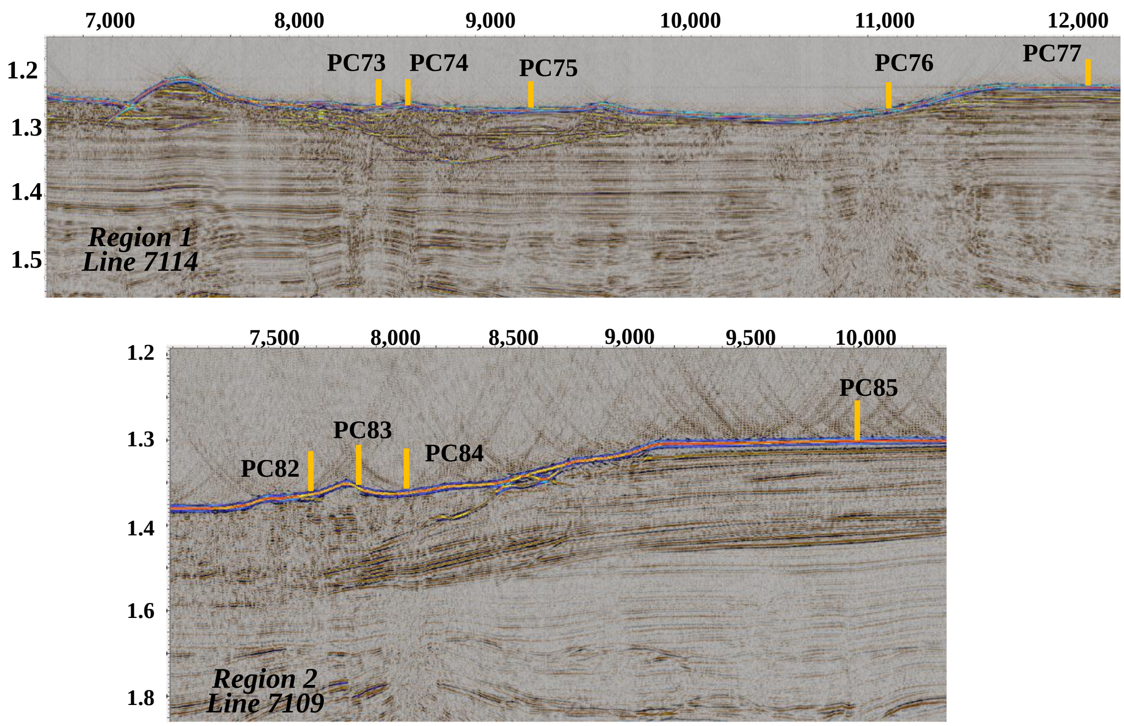


Figure 14: Seismic profiles and core locations for Site 2.

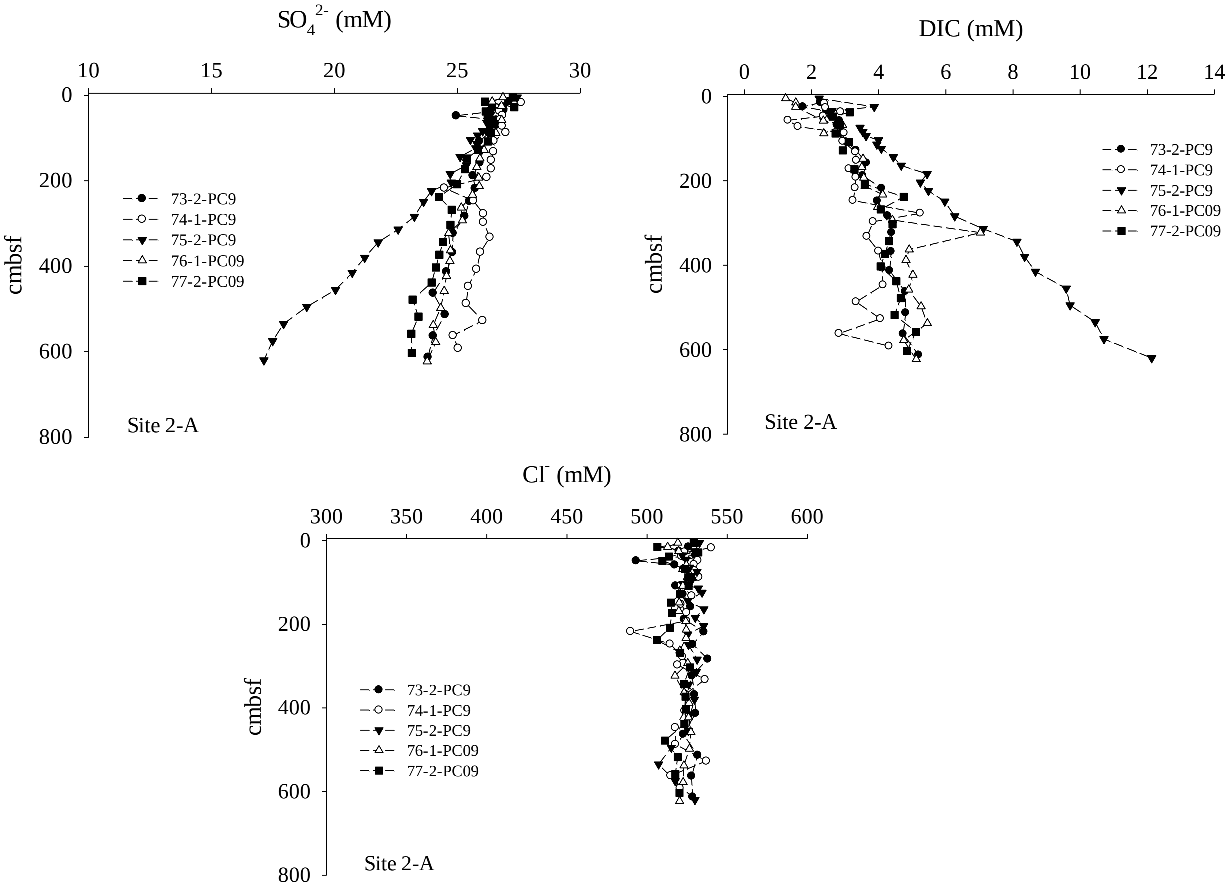


Figure 15: Pore water SO_4^{2-}, DIC and Cl^- profiles from cores taken at Site 2, location A.

At Site 2-B, SO_4^{2-} concentrations in pore water ranged from 27.4 to 22.9 mM (Figure 16). Pore water DIC concentrations ranged from 1.9 to 6.1 mM (Figure 16). Higher DIC concentrations in pore water appear to coincide with lower SO_4^{2-} concentrations, suggesting organoclastic SO_4^{2-} reduction or CH_4 oxidation. Chloride concentrations ranged from 484.8 to 536.2 mM. Vertical profiles do not show strong variations in these cores (Figure 16).

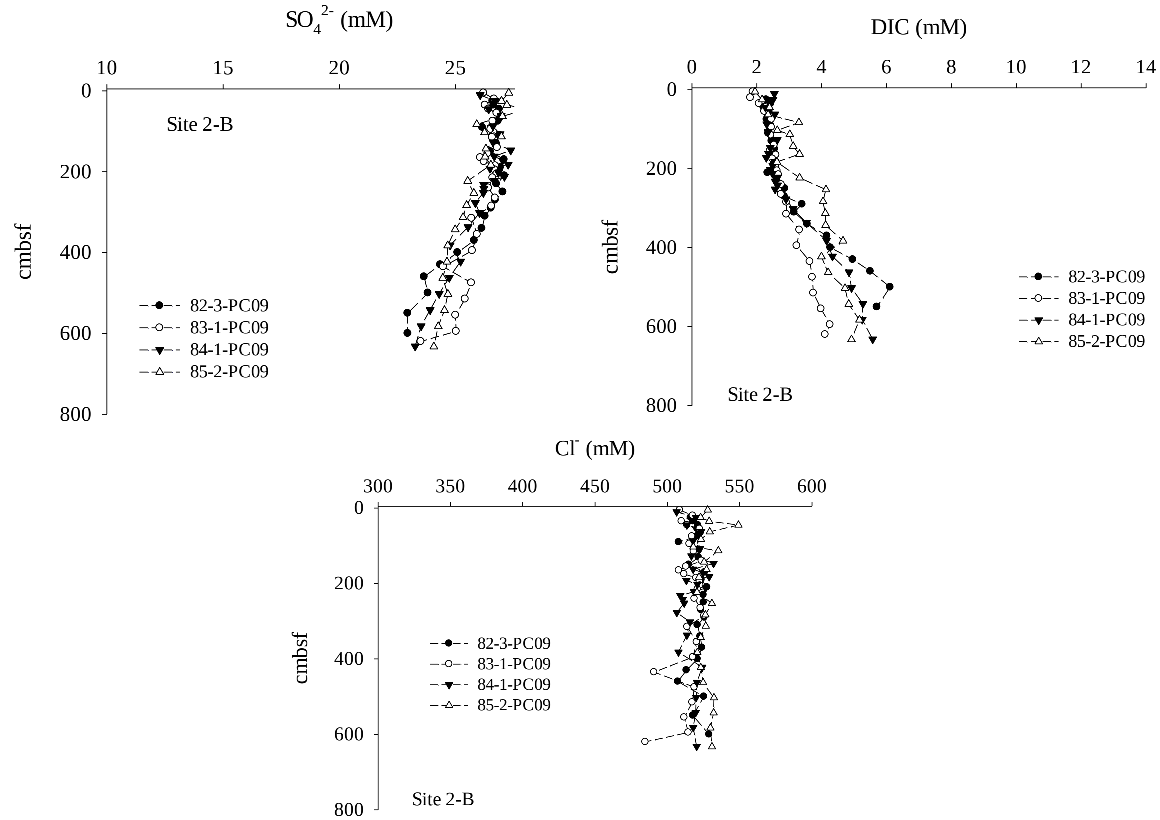


Figure 16: Pore water SO_4^{2-}, DIC and Cl^- profiles from cores taken at Site 2, location B.

C. *Site 3*

Site 3 was located in a shallower region of Chatham Rise in water depths of ~ 570 m (Figure 17). Multibeam patterns and seismic profiles showed a smaller pockmarks with a split pattern below and disturbance in the bands that indicated vertical migration of fluids to the surface (Figures 17 & 18). Three cores were collected in this location: one in center of the flow pattern and the other two on the sides of the center point (Figure 18: PC95, PC96, PC97). PC94 was selected as a control core in a region that showed strong stratification in the seismic profile. PC98 was located in the center of a small pockmark with a disruption in the seismic pattern immediately below and a deep pathway into the sediment (Figure 18). Attempts to core at other locations in this region resulted in breaking core barrels, separating the winch cable wires, and minimal sediment samples.

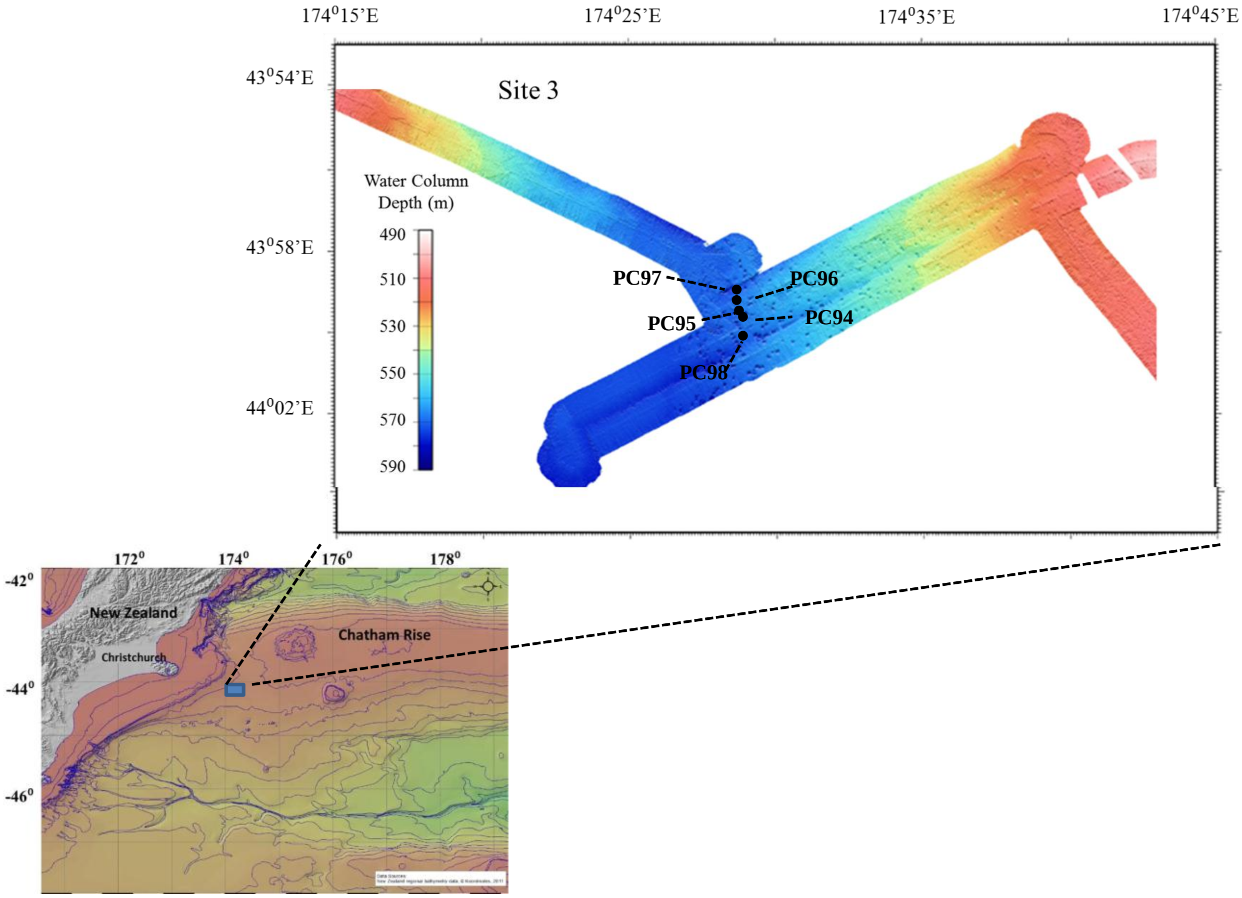


Figure 17: Location of coring Site 3 on the Chatham Rise.

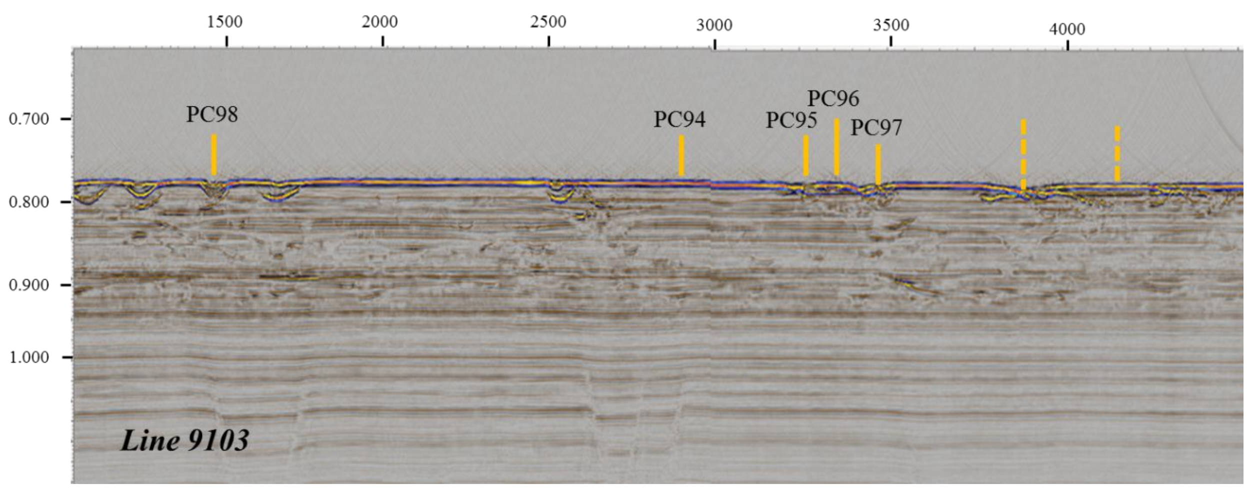


Figure 18: Seismic profiles and core locations for Site 3. Dashed lines represent failed coring sites.

Pore water SO_4^{2-} profiles showed little to no changes in concentration with depth in cores that were 408 to 633 cmbsf (Appendix 3, Figure 19). Dissolved inorganic carbon ranged from form 1.3 to 4.6 mM, generally lower than the other core regions. Some increase in DIC concentration was observed to correspond to a decrease in SO_4^{2-} concentration. Pore water Cl^- concentration ranged 507 to 546 mM and did not show spatial or vertical variations (Figure 19).

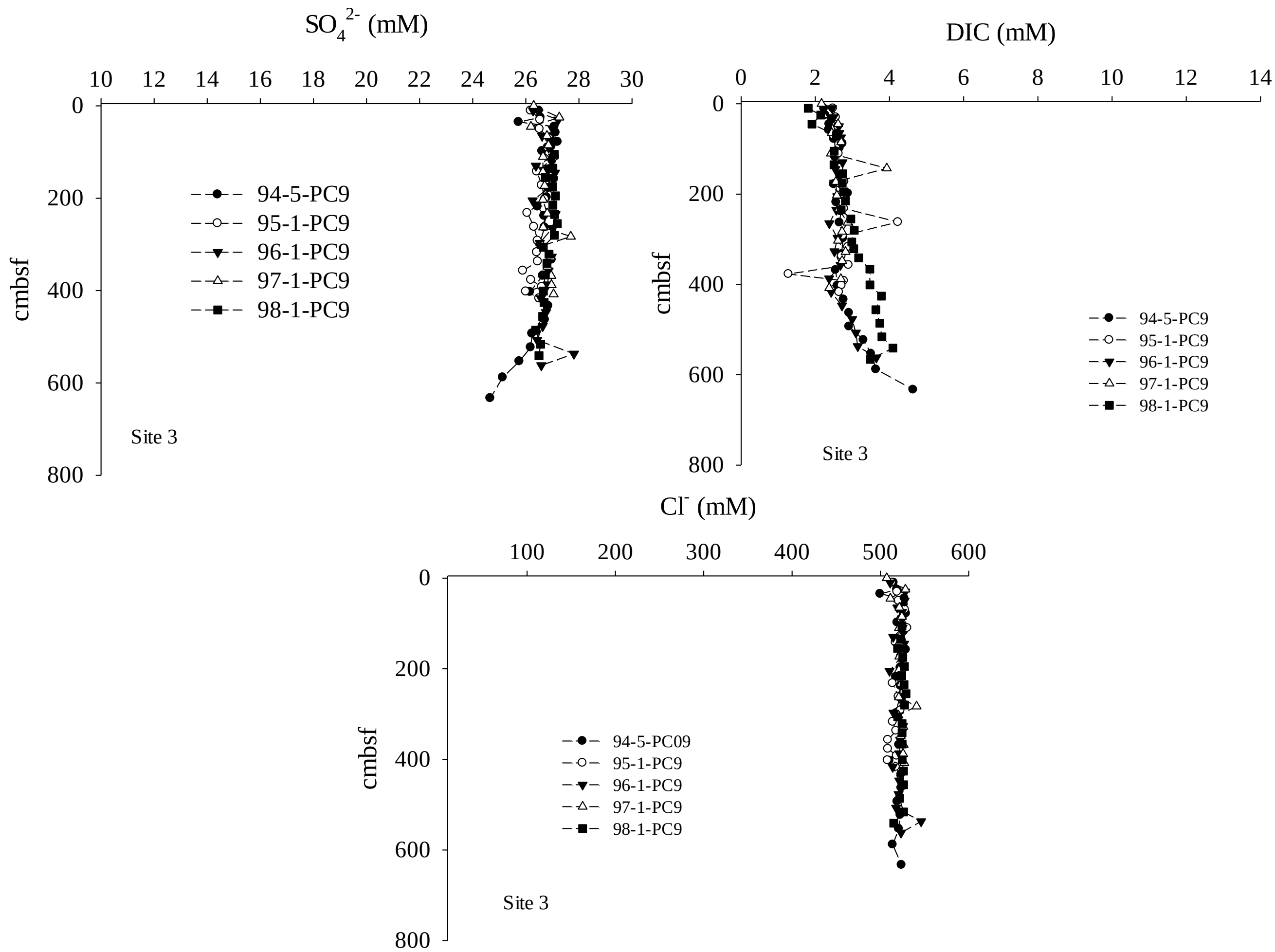


Figure 19: Pore water SO_4^{2-}, DIC and Cl^- profiles in cores at Site 3.

D. *Porewater Geochemistry Summary*

Shallow sediment geochemical cycles that control porewater SO_4^{2-} and DIC are assumed to be AOM or organoclastic SO_4^{2-} reduction. To evaluate the paleogeochemical CH_4 availability and cycling in the shallow sediment there is a need to assess the current day shallow sediment flux and cycling. Studies show that vertical CH_4 fluxes can contribute up to 90% of the shallow sediment organic and inorganic carbon pools (Coffin et al. submitted-A, submitted-B). We summarized the potential modern-day CH_4 input to this study by comparing sediment pore water Cl^- vs. SO_4^{2-} concentrations (Figure 20) and SO_4^{2-} vs. DIC concentrations (Figure 21) for all of the cores in each region. It is assumed that Cl^- is a conservative tracer for SO_4^{2-} reduction during AOM and organoclastic SO_4^{2-} reduction (Figure 20).

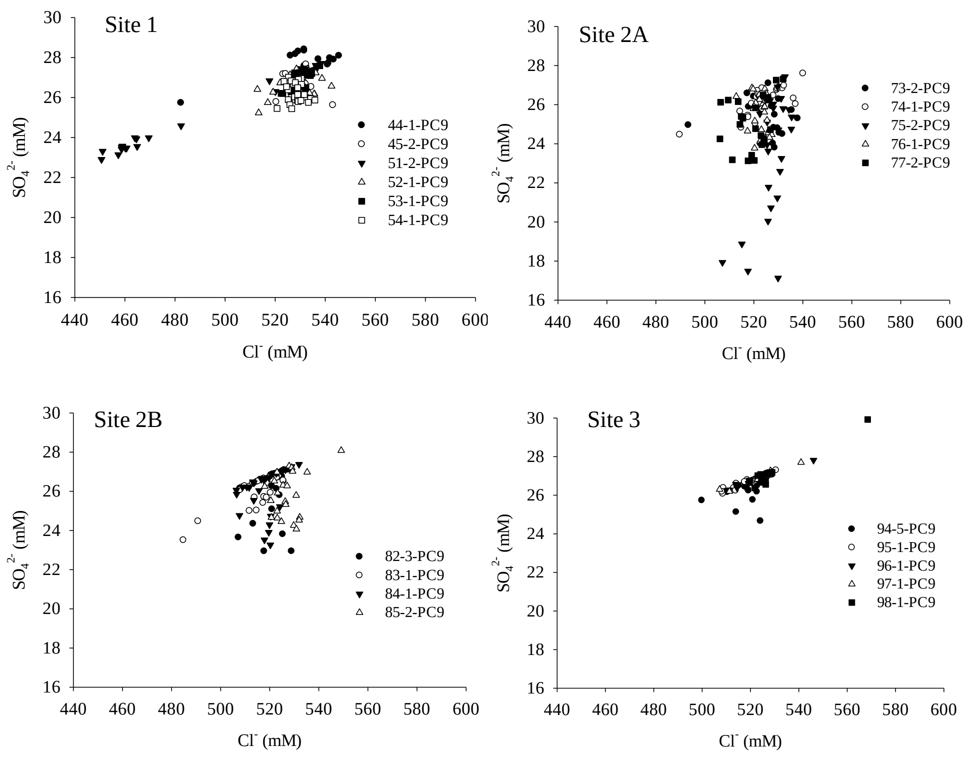


Figure 20: Comparison of the pore water SO_4^{2-} concentrations relative to Cl^- concentrations in cores from each region.

In this evaluation, pore water SO_4^{2-} deviated from the linear Cl- profile at Sites 2A and 2B relative to Sites 1 and 3, suggesting more active SO_4^{2-} cycling. We also assumed that DIC concentrations in the pore water will increase through oxidation of CH_4 or organic matter during the SO_4^{2-} reduction to sulfide (Figure 21; Berner, 1964; Borowski et al., 1996; 1999). Cores taken at Sites 2A and 2B also show a higher pore water DIC concentration relative to a decline in SO_4^{2-} concentration.

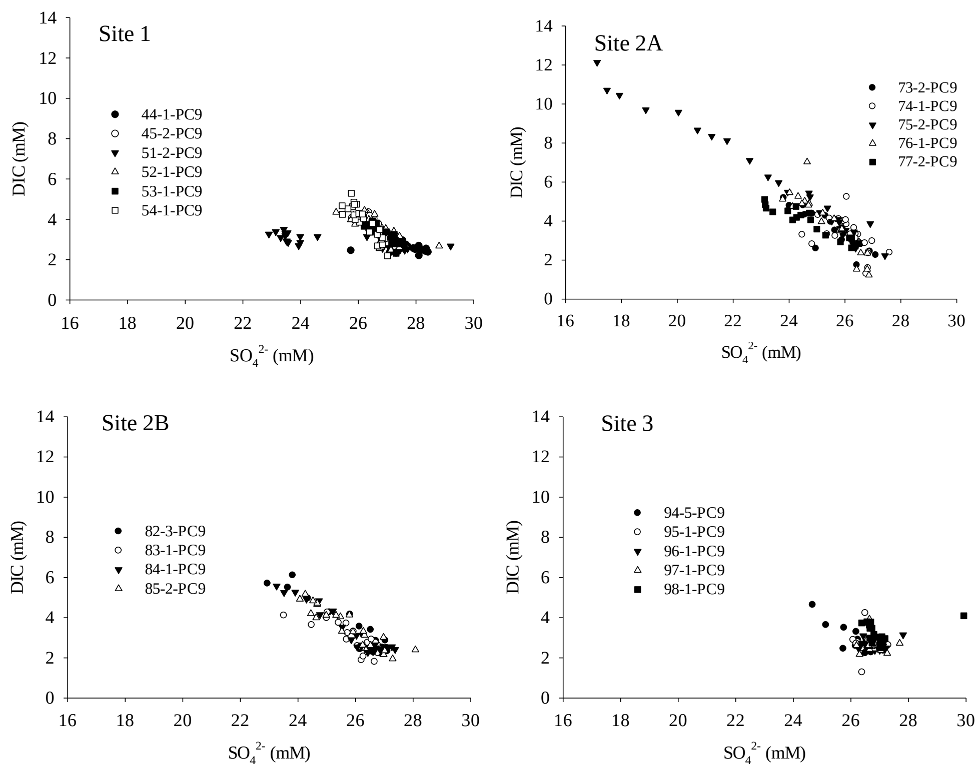


Figure 21: Comparison of pore water SO_4^{2-} reduction relative to DIC production in the cores among the sites.

Sulfate and DIC gradients in the sediments can be used to estimate oxidation of autochthonous organic matter and upwardly diffusing CH_4. We predict sediment depth for depletion of SO_4^{2-} concentration to 0 mM using slope of the linear SO_4^{2-} profile (Table 3). These

pore water SO_4^{2-} concentration profiles suggest these sediments are less active than other regions where strong AOM and sulfate methane transition zones are estimated to be in the range of 0.1 to 12 mbsf (Coffin et al. 2006; 2008; submitted-A; submitted-B). The vertical SO_4^{2-} profiles are used to get a preliminary estimate of the depth of zero concentration assuming sediment porosity, AOM and organoclastic SO_4^{2-} reduction are the primary controls on the distributions. At Site 1 SO_4^{2-} minima were predicted to range from 22 to 103 meters below the sea floor (mbsf; Table 3), with shallower profiles showing more variation through the profile (lower R^2 values). Site 2-A, while SO_4^{2-} reduction was still relatively low, was the most active site studied, with SO_4^{2-} minima ranging from 16.2 to 77.2 mbsf (Table 3). Core PC75, had the greatest estimate for vertical CH_4 migration and was located above an apparent vertical gas flux site observed in the seismic pattern (Figure 14). Cores at Site 2-B showed deeper SO_4^{2-} depletion depths, ranging from 23 to 56 mbsf. Site 3 was even less active in the biogeochemical cycling of SO_4^{2-} with a depleted concentration depth range of 55.4 to 117.3 mbsf. Note that the R^2 values for the linear profiles ranged from 0.988 to 0.140 and slopes with $R^2 < 0.600$ had changes in concentration that were near the analytical limits of detection.

Table 3: Estimates for the depth of SO_4^{2-} minimum created by AOM and organoclastic SO_4^{2-} reduction. These estimates are based on variations in the DIC and SO_4^{2-} concentrations in pore water. These estimates will be assessed for AOM with laboratory analysis of pore water sulfide concentrations and stable carbon isotope analyses of dissolved inorganic carbon.

Site	Core ID	SO_4^{2-} Minimum (mbsf)	R2, N
1	44-1-PC9	34.4	0.140, 18
1	45-1-PC9	101.8	0.829, 25
1	51-1-PC9	22.1	0.549, 21
1	52-1-PC9	69.0	0.607, 22
1	53-1-PC9	103.3	0.774,25
1	54-1-PC9	100.2	0.763, 27
2A	73-2-PC9	51.5	0.955, 18
2A	74-1-PC9	77.2	0.936, 17
2A	75-2-PC9	16.2	0.988, 27
2A	76-1-PC9	50.5	0.962, 24
2A	77-2-PC9	37.5	0.920, 23
2B	82-3-PC9	23.5	0.958, 13
2B	83-1-PC9	38.0	0.760, 13
2B	84-1-PC9	33.6	0.957, 14
2B	85-2-PC9	51.6	0.859, 12
3	94-1-PC9	66.5	0.653, 24
3	95-1-PC9	55.4	0.201, 19
3	96-1-PC9	77.8	0.185, 21
3	97-1-PC9	no slope	n.d.
3	98-1-PC9	117.3	0.622, 18

E. *Radiocarbon Isotope Analyses Background Survey*

Background samples were taken in the lab van and ship to assess any background ^{14}C levels that would interfere with the analyses of natural radiocarbon abundance, as described in the methods section. These data showed a clean radiocarbon background and indicated no interference with radiocarbon natural abundance analyses. The results of these analyses are shown in Table 4.

Table 4: Radiocarbon blank testing for background abundance in the NRL portable lab and the *RV Sonne* laboratories.

Sample ID	Sample Weight (mg)	Carbon Weight (mgC)	Conventional Radiocarbon Age (years BP)	$\delta^{13}C$ (‰)	Fraction Modern (pmc)
841, Lab Van, Whatman QMA filter ashed, no swipe or isopropanol	45.7	0.8	33654 ± 690	-26.2 ± 0.2	0.0152 ± 0.0013
842, Lab Van, Whatman QMA filter ashed, no swipe with isopropanol	44.7	0.9	23731 ± 199	-26.2 ± 0.3	0.0521 ± 0.0013
843, Lab Van, Whatman QMA filter ashed, swipe port side lab bench with isopropanol	45.9	1.0	15745 ± 75	-26.4 ± 0.2	0.1409 ± 0.0013
844, Lab Van, Whatman QMA filter ashed, swipe starboard side lab bench with isopropanol	45.5	1.1	10731 ± 39	-26.3 ± 0.2	0.2629 ± 0.0013
845, Lab Van, Whatman QMA filter ashed, swipe floor with isopropanol	44.8	1.1	14339 ± 60	-26.2 ± 0.2	0.1678 ± 0.0012
SONNE-1, Location 1	46.1	0.7	13206 ± 52	-23.3 ± 0.2	0.1932 ± 0.0013
SONNE-2, Location 2	45.3	1.2	26598 ± 282	-26.3 ± 0.2	0.0365 ± 0.0013
SONNE-3, Location 3	46.1	1	13945 ± 57	-26.2 ± 0.2	0.1762 ± 0.0013
SONNE-4, Location 4	45.9	1	13516 ± 55	-26.2 ± 0.2	0.1859 ± 0.0013
SONNE-5, Location 5	44.1	1	9095 ± 38	-26.3 ± 0.2	0.3223 ± 0.0015
SONNE-6, Location 6	45.3	1.1	12171 ± 46	-26.4 ± 0.2	0.2198 ± 0.0013
SONNE-7, Location 7	44.8	1.2	18021 ± 110	-26.7 ± 0.2	0.1061 ± 0.0015
SONNE-8, Location 8	44.8	1.1	12135 ± 46	-27.1 ± 0.2	0.2208 ± 0.0013
SONNE-9, Location 9	44.2	1	26609 ± 282	-26.5 ± 0.2	0.0364 ± 0.0013
SONNE-10, Location 10	44.8	1.2	42387 ± 2015	-26.2 ± 0.2	0.0051 ± 0.0013

VI. Summary

The preliminary data obtained during the SO226/2 expedition provides the following information for completing the analysis of samples to evaluate paleogeochemical CH_4 cycling across Chatham Rise.

1. Low current day CH_4 vertical fluxes suggest there will not be an overlap of the modern day and paleogeochemical carbon cycling.
2. A large variation in shallow sediment depths relative scoured regions will require careful selection of cores sites and thorough age profiles in the mixed sediment.
3. Current day organic and inorganic carbon sources will be determined with analysis of $\delta^{13}C$ of organic and inorganic sediment and pore water carbon.
4. Stable nitrogen isotope analysis of organic matter will be included in the evaluation to understand the shallow sediment carbon cycling.
5. Radioisotopes (^{230}Th, ^{210}Pb, and ^{231}Pa) will be examined through the coring regions to determine the modern day sedimentation rates and spatial variation of sediment mixing and redistribution.
6. $\Delta^{14}C$ of sediment inorganic and organic carbon to determine if CH_4 contributed to shallow sediment carbon cycle during previous climate change events.

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Appendix 1: Weekly Reports

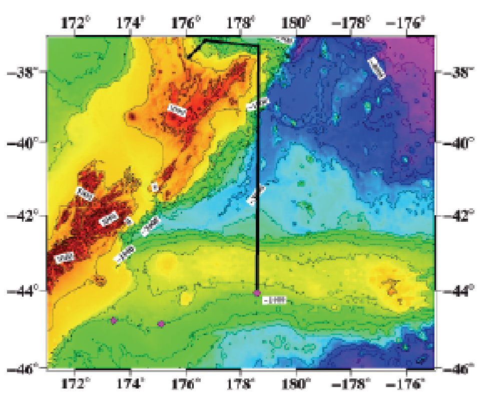
SO226-1 Week 1

1. Weekly Report SO226 CHRIMP

In order to prepare for the first leg of cruise SO-226 17 scientists joined in the port of Auckland on 07th Jan. 2013 on board R/V SONNE. The expedition, headed by GEOMAR, Kiel, is undertaken in co-operation with scientists from University of Southampton, GNS Lower Hutt, the University of Otago and the University of Auckland.

The aim of the project CHRIMP is to investigate gas expulsion sites along the Chatham Rise where in previous times or even today methane gas may be expulledfrom the seafloor. Methane is one of the most aggressive greenhouse gases driving climate change. Unfortunately the amount and the dynamics of natural methane reservoirs and sources are (e.g. as gas hydrate layers along the continental margins) are not completely understood. Improving our understanding and modelling of climate dynamics requires detailed quantitative knowledge of natural reservoirs and sources of methane, such as the widespread gas hydrate deposits of the continental margins. Increasing numbers of active and passive locations of fluid and gas expulsion (cold seeps) are known from these areas. At present only seeps from shallow water contribute methane directly to the atmosphere, but much higher flow rates have been inferred for the past. Many locations of focused fluid flow appear as funnel-shaped depressions at the seafloor, so called “pockmarks”. Typical dimensions are within a few hundreds of meters. However, five to twelve kilometre wide “giant pockmarks” (GP) are known as well. Although full understanding of the mechanism of formation of such pockmarks is lacking GPs are thought to be responsible for massive gas release causing the Palaeocene/Eocene Thermal Maximum (PETM) at about 55 million years ago. Offshore New Zealand GPs have been identified at the Chatham Rise and allow studying these systems in the context of exceptionally stable water temperature during glacial sea level variations.

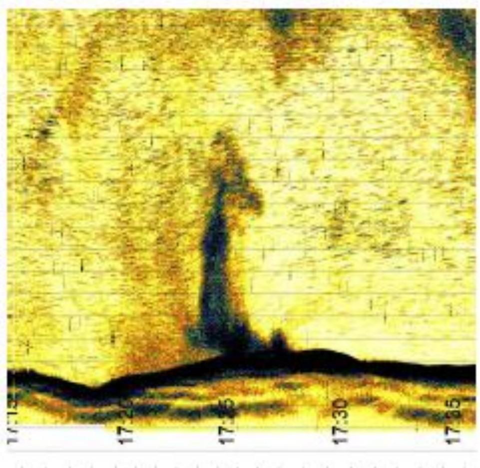
Auckland to Chatham



The port call on 07. and 08. Jan. was used to complete repairs of the vessel and to prepare the scientific equipment. Until 07. Feb. it is the task of the first leg to map pockmark structures by sub-bottom profiler and seismic data. 2D seismic is used to identify suitable locations that will be imaged in 3D later on by the GEOMAR P-Cable system.

On the 09. Jan. bunkering was completed and the 600 nm long voyage towards the working area at 178° E and 44° S began. Thanks to continuously favourable weather the scientific crew have easily become used to sea conditions.

On 12. Jan mapping of a 10 km wide depression was started. Due to the morphologic expression the structure it was interpreted as a giant pockmark. If further structures of the subsurface support this interpretation we will start our first 3D investigation along this structure. Within the last hours indications for a similar structure right next to the currently investigated one were recorded. A 200 m high gas flare mapped by the Parasound echosounder demonstrates the current seep activity of this structure. Despite a large number of known pockmark structures it is the first confirmation of gas expulsion along the Chatham Rise.

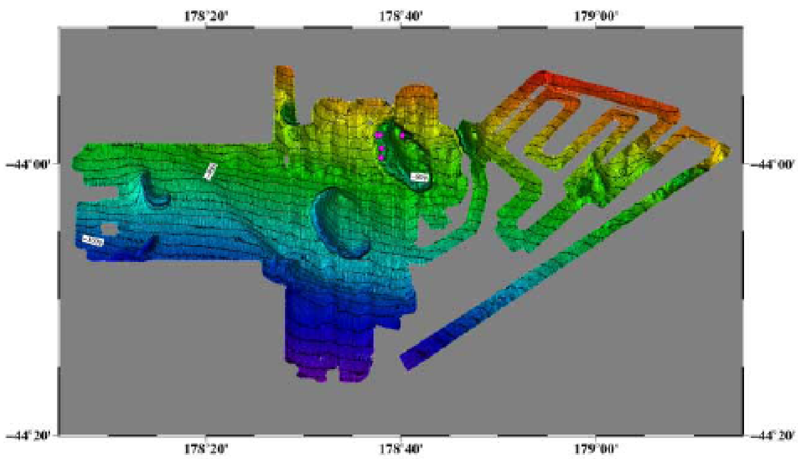


All are doing well on board. With regards on behalf of all participants

2. Weekly Report SO226 CHRIMP

During the second week at sea the 2D seismic reconnaissance profiles were completed. The majority of active gas seepage sites have been found near the western rim of the north-eastern giant pockmark discovered on this survey. Due to the observed gas flares this structure was chosen for the seismic 3D investigation area.

Chatham Pockmarks Area 1



Additional depressions were mapped during the reconnaissance profiles. Their lateral extent is of similar dimensions to that of the two central structures. Some of them are not (yet ?) developed into a circular outline. Signs for active gas expulsion were not observed from these structures.

Images from Parasound and airgun seismic show that sedimentary coverage of both large scale structures must have been entirely eroded during their formation. A correlation of sediment interfaces within the subsequent infilling sediment with those from the slope surrounding the structures, has not yet been successful. All active seep sites are located near the rim of the structure where sediment infill did not reoccur. Further profiles not only show additional structures with a similar outline in the working area but also that similar features must have been formed in earlier times at different locations along the southern slope of the Chatham Rise. We have already recorded images of several buried systems, which have no topographic expression in the present-day bathymetry.

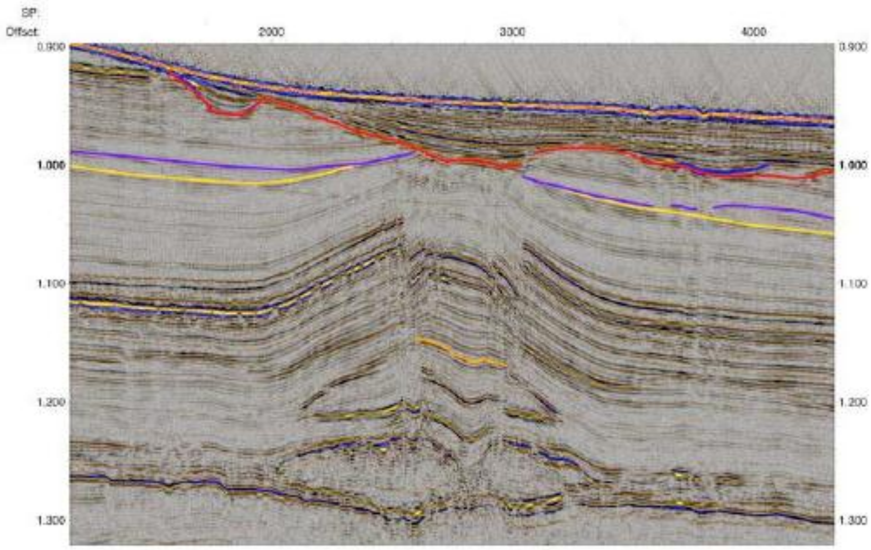
The 3D seismic survey is recording data collected by 10 towed seismic streamers and 19 ocean-bottom seismometers, the latter being earlier deployed within the 3D area. On Wednesday and Thursday evening we had to interrupt profiling due to bad weather conditions. Since Saturday 3D measurements have continued uninterrupted.

All are doing well on board. With regards on behalf of all participants

3. Weekly Report SO226 CHRIMP

During the third week at sea we continued the data acquisition in the 3D area. After interruptions due to the weather conditions we finally achieved full coverage. A first compilation of the data volume has already allowed a visual walk through of the data cube created. Numerous gas migration pathways can be identified, not only related to the observed active vent sites. The imaging of a complete lens shaped body underneath the upper sedimentary layers is of importance as similar features appear widely throughout the region. Inverted amplitudes at the upper interface of this body argue for increased gas content.

Similar structures were observed along the 2D seismic lines. Lens-shaped bodies do occur under the pockmark structures and under undisturbed seafloor. These lens features occur more commonly in the east of our working area. Below the lens shaped bodies strong but irregular amplitudes outline the top of the next sediment layer. Migration pathways from this lower sediment body into the lens shaped structures are indicated by interruptions and scattered amplitudes. From the top of the lenses migration pathways for gas ascending toward the seafloor are interpreted. Sediments above these structures are of continuous thickness but seem to be uplifted during emplacement of the lenses.



A preliminary interpretation of the stratigraphy has been started already. The deepest interpreted horizon is imaged at about 400 ms to 500 ms below the seafloor. Below this horizon crests of anticlinal strata are imaged by sporadic reflections. The deepest interpreted interface is continuous throughout the entire working area. The overlying sediments have been grouped into 4 packages. Interfaces between the packages are difficult to identify in parts due to reflection amplitude varying a lot along the interfaces or the interface having been eroded. The lower-most seismic package is marked by irregular and strong reflections and inverted amplitudes within the package are interpreted to indicate gas accumulations. Numerous gas migration pathways are visible leading from this interface upwards.

An extended slump mass has been identified in the east of the working area underneath undisturbed seafloor. This package is also characterised by strong irregular reflections. The limits are well defined. Faults provide sharp boundaries to stacks of undisturbed sediment layers within the structure.

After acquiring some additional 2D seismic lines we left the working area on Sunday. Currently we are sailing along reconnaissance lines above the mid size pockmarks in our second working area.

All are doing well on board. With regards on behalf of all participants

4. Weekly Report SO226 CHRIMP

At the beginning of week four we moved to the second working area where bathymetric profiles have previously imaged pockmarks of mid-size (typically 3-5 km diameter). As there are no existing seismic images of the subsurface available we ran a reconnaissance 2D seismic survey first. Migrated sections of these lines image a very different sedimentation regime than observed in the previous working area.

The Pockmark field of working area 2 seems to be inactive or of limited modern activity as we did not come across any gas flares in the water column. Images of two different systems of fluid migration pathway were found underneath the seafloor depressions.

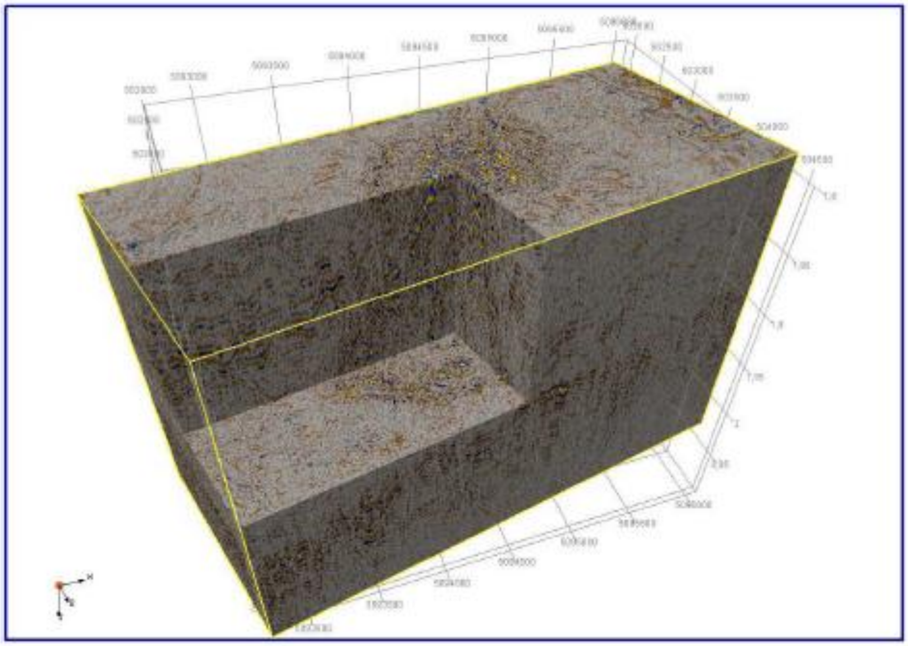
In the first system there are features, which are comparable to what we have observed in the first working area with a radial graben forming the rim of the pockmark and the centre of the pockmark having been eroded down to an interface that can be traced continuously throughout the region. This interface is found at the same depth as the base of the graben. The centre and generally north-eastern parts of the rim have been covered with sediment again and in some areas prominent contourite deposits are imaged. Underneath the rim of the pockmark near vertical faults in the seismic data are interpreted as possible migration pathways for fluid flow.

The second system is characterised by a 250 m wide transparent zone underneath the pockmark. This is interpreted as an ancient feeder channel and can be traced vertically for about 2 km. Reflection events from an interface imaged beneath this vertical channel bend upwards in conical shape at this location. This feature may be completely covered and imaged by the 3-D seismic volume subsequently acquired. The horizon below this interface shows a rough topography but no signs for fluid migration pathways. The top of the feeder channel can be imaged until it intersects with the erosional horizon forming the original base of the pockmark. Infilling sediments involving multiple periods of infill are seen above this erosion surface and are extensively imaged elsewhere in Area 2.

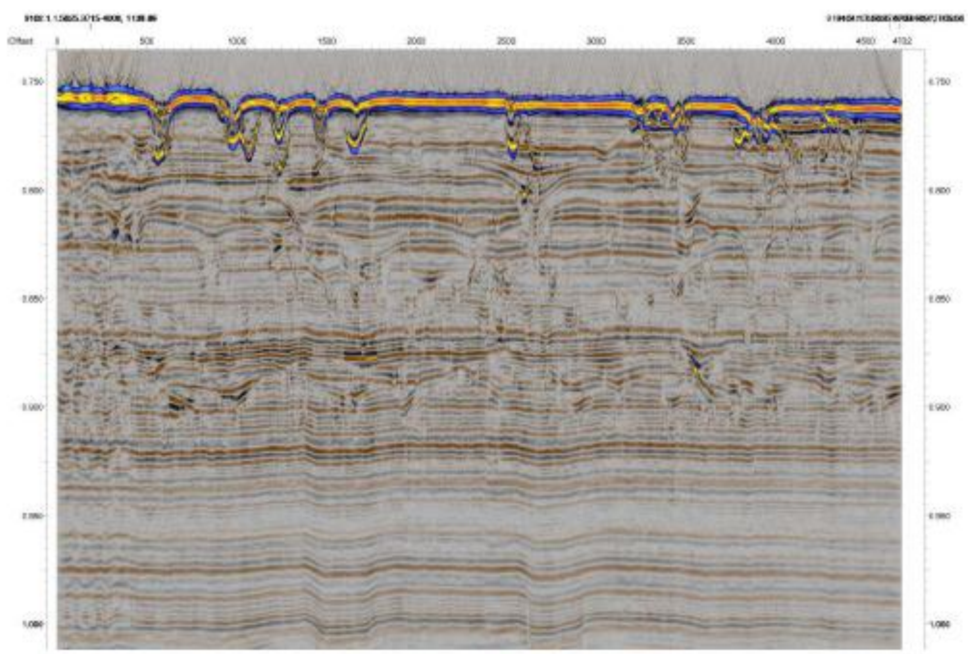
The third working area of the cruise is located in shallow waters (500 m) near the top of the western Chatham Rise. Previous multi-beam bathymetric surveys have mapped a dense distribution of evenly spaced normal size pockmarks (one to two hundred metres diameter). Parasound seismic images from a 2003 RV Sonne voyage show multiple stacks of pockmark layers. Below the penetration of the Parasound, the seismic images collected on this voyage show additional layers of buried pockmarks. No further pockmarks are visible below about 150 metres beneath the seafloor. Unfortunately weather conditions did not allow deployment of additional OBS's at the 3rd site. During the evening of the 04 February another low pressure system arrived from the south. Wind and wave state did not allow continuation with any scientific work.

We are looking back on intensive weeks which have provided us a very large data set. The first impressions of the data do not fit to what we have expected. Questions are caused by understanding the context of pockmarks and sedimentation. We need to explain the variability in distribution of the pockmarks along the Chatham Rise. As well it is not obvious how the two different feeder systems lead to similar anomalies of the seafloor topography.

Leg 1 of cruise SO226 will end on 07 February in the port of Lyttleton. Here we will pass on our findings to the following crew. Based on the seismic images collected and maps compiled suitable locations for sampling and detailed observations by sidescan and video are to be identified.



3D image oft he conical lower part of the feeder channel of a pockamrk



Seismic image of multiple layers of buried pockmarks

1. weekly report SO226-2 CHRIMP

Following some long travel for some of us 22 scientists from New Zealand, the United States and Germany took over R/V SONNE from our colleagues of the first leg on February 8, 2013. Our goal is to continue the investigations of large seafloor depressions on the Chatham Rise with deep-towed sidescan sonar, OFOS (Ocean Floor Observations System) and to sample the already known structures with piston and multicorer. In addition we have brought along a portable multibeam echosounder with the capability of water column imaging and several methane sensors in order to search for indications of methane release into the water column.

Prior to the cruise, on February 7, we exchanged our ideas with the participants of the previous leg in order to focus on specific targets that we will tackle within the next three weeks. February 9 was largely dedicated to unpacking the equipment and to setting up the laboratories. During the day the transducers of the ELAC multibeam also had to be fixed under the moon pool. Unfortunately, these transducers are slightly too big to fit through the moon pool and had to be mounted under the ship by divers. On February 9, R/V SONNE briefly changed berth for refueling and finally, at 17:00, we left for a 24 hours transit to our easternmost working area.

Station work in the area started with a CTD cast in order to have the latest sound velocity profile for both the multibeam data and for the calibration of the Posidonia USBL antenna. A 48 hours deep-towed sidescan survey was then designed to further constrain possible fluid emission sites or so-called „cold seeps“. However, to our surprise, the sidescan data did not show indications for recent fluid venting activity and even a fluid-flow related origin of the structures might be questionable. However, exposed sediment layers at the rim of the depressions are well shown (Fig. 1). Subsequent sampling of the south-westernmost large seafloor depression revealed massive layers of chalk in just a few decimeters of subbottom depth (Fig. 2). These chalk layers are fairly cohesive and difficult to sample. On one 6 meters long piston core that eventually recovered 4.5 meters of sediment, the pull had to exceed 90 kN in order to get the corer out of the seafloor. We subsequently changed our sampling strategy and concentrated on seafloor depressions slightly further north and in shallower water depth in order to avoid the chalk. Sampling of one of these seafloor depressions with multicorer and piston corer is still continuing. However, first analyses of the pore waters in the working area show the presence of higher hydrocarbons and therefore an indication for a thermogenic origin of the gases in the sediment.

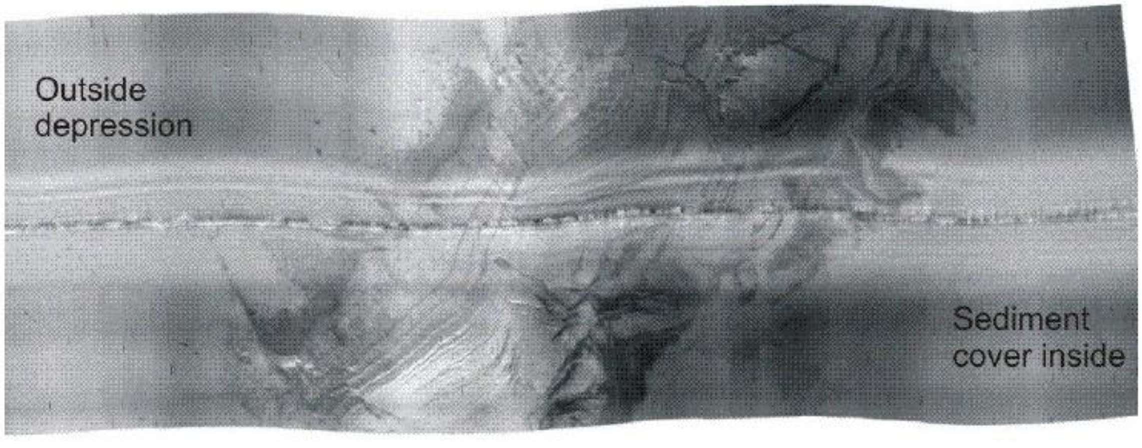


Figure 2: The transition from glauconitic sandy-mud to chalk in 70 cm subbottom depth. The indurated part forms a depositional hiatus.

Everyone on board is doing well despite some significant swell.
Best regards on behalf of all cruise participants,

Ingo Klaucke
Chief Scientist

2. weekly report SO226-2 CHRIMP

Indication for thermogenic gases in the near-surface sediments of working area 1 could not be substantiated during the second week of our cruise. Instead, most of the porewater profiles show an almost vertical trend in sulphate concentration (Fig. 1), which suggests that the sulphate-methane transition is way beyond 10 meters subseafloor depth and the vertical methane flux consequently nonexistent. These results are in opposition to the seismic data that show clear evidence for vertical fluid migration. This fluid flux, however, must have stopped quite some time ago and most probably was already no longer active during the last glacial cycles. The lack of a methane signature in the near-surface sediments is quite remarkable as the overlying water masses do show signs for high primary productivity (clear zooplancton layer in water column data, abundance of fish and seabirds). Degradation products of this primary productivity, however, do not seem to be preserved in or even reach the sediments. Following the coring program, we also had a closer look at the seafloor using the OFOS video sled for a profile over the coring locations. This video transect showed that the sediments, especially at the bottom and the western flanks of the depression, are already well indurated (Fig. 2), which, in hindsight, explains our difficulty to core these locations.

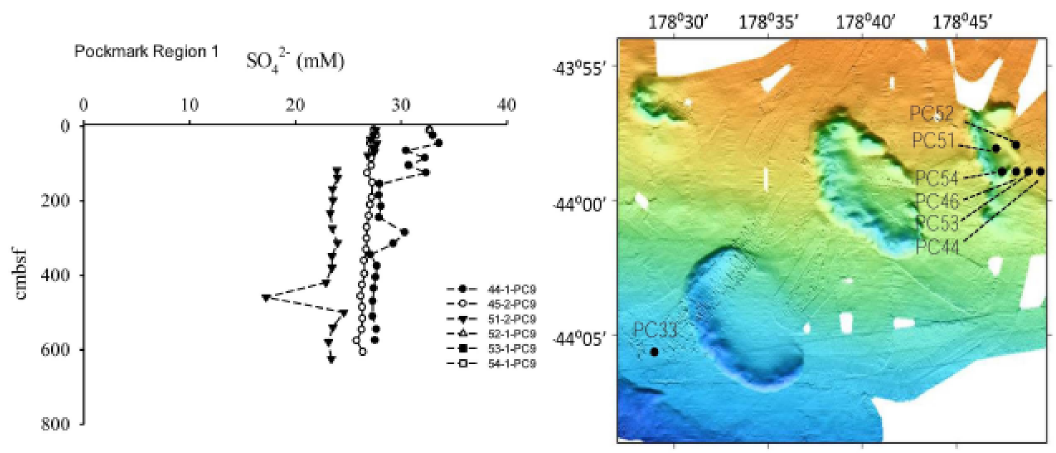
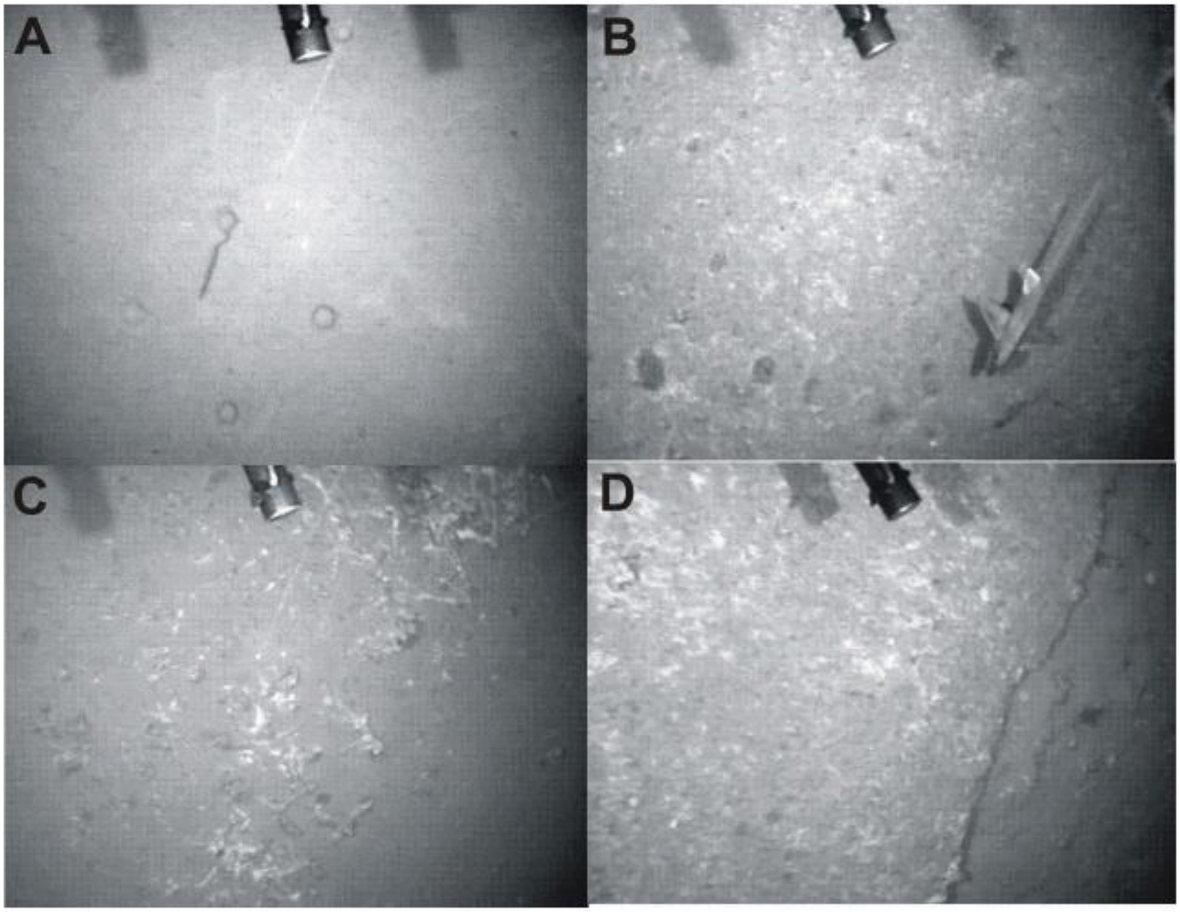


Figure 1: Sulphate concentration in the porewater of sediment cores from within the northeastern large seafloor depression.

During the second part of the past week we concentrated our efforts on the second working area that is located slightly further to the West. We started with a sidescan survey, but, although seismic indications for vertical fluid migration are even stronger in this area than in working area 1, the sidescan sonar failed to show any signs of increased backscatter intensity and hence no sign for active or recent fluid venting. Intensive coring of the area confirmed this first impression. Here again, pore water profiles did not show methane and the slight decrease in sulphate again points to sulphate-methane transition in greater subbottom depth. Fluid venting and the dissociation of gas hydrates seem to be unlikely the origin of the large seafloor depressions on Chatham Rise. In order to look for alternative explanations, we will start a short mapping program before turning our attention to the third, westernmost and shallowest working area.

Figure 2: OFOS images of the seafloor for a profile running across the northeasternmost depression in figure1. It shows a relatively soft sediment infill (A. Note the imprint of the multicorer) and hard, already well indurated sediments at the bottom and western flank of the depression (C-D).



Everyone on board is doing well.
Best regards on behalf of all cruise participants,

Ingo Klaucke
Chief Scientist

3rd and last weekly report SO226-2 CHRIMP

During the third week we finished our sampling program of the second working area, which confirmed our initial impression that the seafloor depressions in this area are also devoid of indications of a recent methane flux. While looking for alternative explanations of the formation of the depressions, the idea that they might represent stacked ancient meander cut-offs of a now partially buried deep-sea channel. In order to test this working hypothesis we expanded on the known detailed bathymetry and discovered indications of downslope sediment movement and retrograde erosion (Fig. 1). However, the spatial relationship with the depressions and possible sediment transport directions will have to be determined by future detailed analysis of the Parasound and multibeam data.

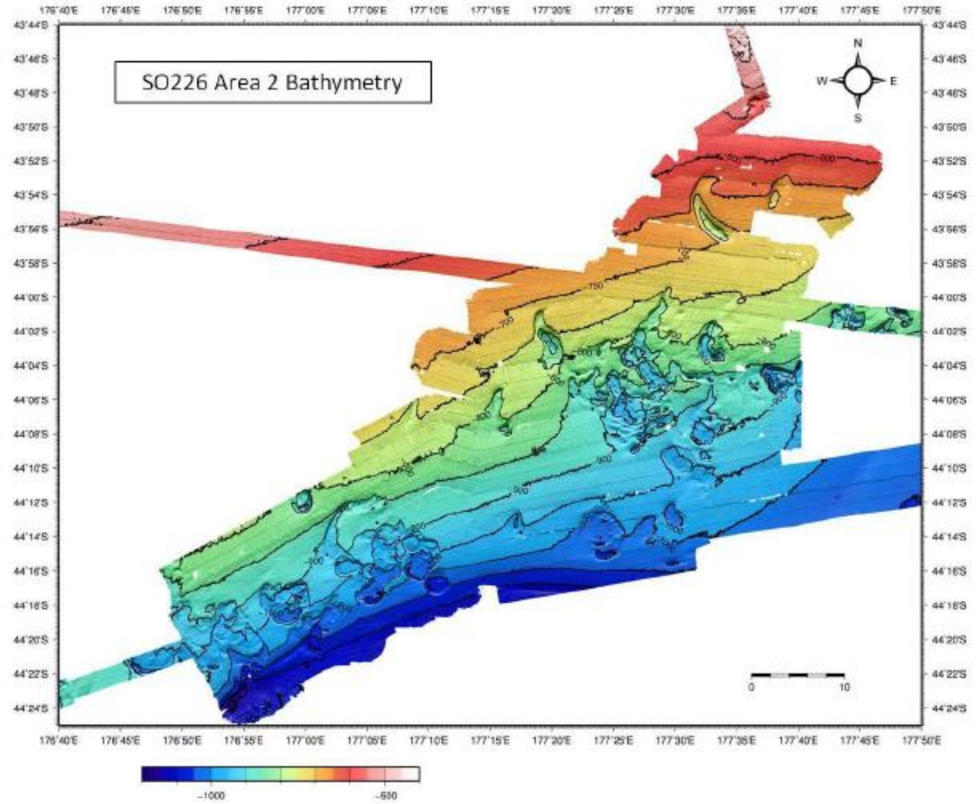


Figure 1: Extent of detailed bathymetric map of working area 2 at the end of cruise SO226-2.

After finishing work in area 2 we had a 18-hours transit to the third and last working area, which is located is slightly shallower (water depth around 500 meters) than the previous working areas and scattered by many small depressions. We again surveyed this area with sidescan sonar and could not detect any sign of recent or active methane emission. Following the sidescan profiles a series of multicorer and piston corer stations along one of the seismic profiles obtained during leg one was undertaken. Coring showed that the area is at least partially covered by massive sand layers, which explains our difficulty to sample these deposits with our equipment.

The second leg of cruise SO226 was quite successful regarding both the quantity and the quality of the data. Besides bathymetric surveying we mapped 500 km² with high-resolution sidescan sonar,

deployed the multicorer 46 times, the piston corer 39 times and almost all deployments were successful. The geochemists onboard ended up with more than 7000 individual samples to process and like all other groups (Fig. 2) will return with a wealth of interesting data that have to be processed and interpreted in the upcoming months.

Figure 2: The Science team onboard RV SONNE cruise SO226-2 CHRIMP.

Everyone on board is doing well and looking forward to be back on firm ground.
Best regards on behalf of all cruise participants,

Ingo Klaucke
Chief Scientist

Appendix 2: Key daily operations for SO226/2 are listed in the following text. Log of this activity follows the brief description.

February 7, 2013

- Initial laboratory and deck operations organization
- Receipt of final operation gear
- Meeting to discuss field planning. Discussions included review of the seismic data at Site 1-3. Participants included. Ingo Pecher, Ingo Klaucke, Rick Coffin, Paula Rose

February 8, 2013

- Installation and testing of laboratory instruments
- Review of lab, core processing and deck equipment

February 9, 2013

- 15:00 departure for first station
- Ship safety review
- Lab instrument calibration
- Ship science meeting on field plan
- NRL meeting on laboratory and deck operations
-

February 10, 2013

- Transit to Site 1
- Lab instrument calibrations were conducted on the GC, IC and calorimeter
- CTD testing was conducted.
- SIMRAD Multibeam / Parasound operations were run

February 11, 2013

- Multibeam calibration was conducted
- Initial “test” piston core was taken in a seismic non-active region

February 12, 2013

- Multi-beam run through Site 1 for 24 hours.
- Sediment gases, DIC, and sulfate were analyzed from the test core

February 13, 2013

- Piston coring was started across Site 1, running westward to the east

- Geotech and NIWA piston cores were retrieved
- On the first core running down into the control site pock mark located furthest east the core was stuck in the sediment. Pull out on the winch was not strong enough to remove the core. Ship pulling broke the wire and the corer was lost.
- SIMRAD Multibeam / Parasound (EM/PS) operations were run through the evening

February 14, 2013

- A decision was made to move to an apparently more active region with the coring. This is a smaller pock mark located the furthest northeast.
- A this location a far westward piston core was taken. The core contained high course sand layers on top of chalk. Because of the composition the core was not the depth needed for this study.
- Geotech and NIWA piston cores were retrieved
- The second core taken was the next station eastward at the edge of the pockmark. This core lost the bottom barrel.
- Changes in coring operations were discussed to run multi-coring prior to piston coring to check the sediment conditions.
- Multi-coring was run on sediment core sites through the evening.

February 15, 2013

- Piston coring was started at the furthest east location. For two cores moving westward good deep cores were retrieved.
- The third core taken was one station further west toward the pockmark. This core lost the bottom barrel.
- Coring operations were discussed with a decision based on observation of seismic profiles to move to the north east of the same pockmark for piston coring and fill in additional core sites in the southern transect on the eastern side of the pock mark.
- Multi-coring was started in the late evening to test the piston core test site and retrieve shallow sediment at the piston core sites for assessment of modern day sediment deposition.

February 16, 2013

- Multi-coring was completed at 7:00 AM
- Piston coring operations were started at 8:00AM and completed by 14:00 with retrieval of 4 cores in the 6-7 meter length range.
- A video sled was towed through the operations area.

February 17, 2013

- Milbar lead coring operations for U. Otago. Four cores were taken for ground truthing of seismic data profiling. These core were taken with the piston core turned into a 3 m gravity core. The region was no active sediment.
- NIWA lead multi core. NRL (P. Rose) obtained two cores to calibrate shallow sediment age data analysis. Cores were the first core at the piston core test site and the furthest west piston core at Site 1.
- Transit to the second coring location was started, this was a 13 hour distance.

February 18, 2013

- Water column CTD profiles were conducted
- Multibeam side scan was initiated in the new study region with a plan to run scans for 48 hours
- A group discussion evolved on the next coring sites, Site 2.

February 19, 2013

- Multibean side scan was continued.
- Core barrels were fixed and the piston core set up for further operations.
- Porewater sulfate and chloride sample analysis from the first location was completed.

February 20, 2013

- Multibean side scan was continued.
- Multicoring was conducted at Site 2-A
- Piston coring was initiated on Site 2-A

February 21, 2013

- Piston coring was continued on Site 2-A.
- Multicoring was initiated on Site 2-B.

February 22, 2013

- Piston coring was continued on Site 2-B.
- Surveying with the EM/PS was continued

February 23, 2013

- Towed array for ocean floor observation
- Surveying with the EM/PS was continued

February 24, 2013

- Side scan was run.

February 25, 2013

- Multicorer was run on site 3
- Piston coring was conducted on site 3

February 26, 2013

- Through this final run all but one of the core barrels were bent or lost, piston coring was terminated.
- Multicoring was completed at this last site.

February 27, 2013

- Final EM/PS surveying
- Transit to Wellington

February 28, 2013

- Packing instrumentation
- Complete IC analysis before packing this instrument
- Transit to Wellington

March 1, 2013

- 08:00 docking in Wellington New Zealand.
- Ship offloading operations began.
- All shipping was organized and secured.
- All personnel were off loaded and began travel home.

The following is a copy of the official cruise daily activity log.

Abkürzungen / Abbreviation		**Eingesetzte Geräte / Equiopment used**	**Einsätze / tasks**
z.W	zu Wasser / into water		
o.D.	an Deck / on deck	CTD	2
SL (max.)	(maximale)Seillänge / max. rope-length	OFOS	3
LT	Lottiefe nach EM 120 / Depth of EM 120	Piston Corer	39
W x	eingesetzte Winde / Winch used	Multicorer	46
nm	Seemeilen / nautical miles	Deeptow-Sidescan	3 profiles
EM/PS	SIMRAD Multibeam / Parasound	Gravity Corer	4
rwk / COG:	Rechtweisender Kurs / true course	ELAC-Profile	1 profile
d:	Distanz / distance	EM / PS-Profile	8 profiles
v:	Geschwindigkeit in Knoten / SOG in knots	Calibration of Posidonia	1
SL:	Seillänge / rope-length		
KL:	Kabellänge / cable-length		
SZ:	Seilzug / rope tension		

Geräteverluste / lost Equipment: 1 Piston Corer

Winde	D/M	Type	RF-Nr	SO 226-2 Tasks	intotal tasks	SO 226-2 length	intotal length	Condition	SO 226-2 max. length	max. rope length ever lowered
W 1	18,2	LWL		0 h	0 h	0 m	0 m	0	0 m	0 m
W 2	18.2	LWL	071000295		73 h		81574 m	2		5770 m
W 4	11	Koax	71000299	2 h	2 h	1824 m	1824 m	2	952 m	952 m
W 5	11	Koax	80700329	0 h	223 h	0 m	171863 m	5	2650 m	5600 m
W 6	18,2	Koax	21200118	77 h	77 h	71737 m	71737 m	2	1044 m	1044 m

Station	Date	UTC	PositionLat	PositionLon	Depth [m]	Wind [m/s]	COG [°]	v [kn]	Equipment used	Abbrev.	Action	Remarks
SO226/028-1	10/02/13	7:00	44° 6,52' S	178° 45,00' E	876	N 7	90.2	0.7	CTD	CTD	Start Station	Wasserschall-Profil
SO226/028-1	10/02/13	7:03	44° 6,51' S	178° 45,01' E	876	N 8	42	0.2	CTD	CTD	zu Wasser	W 4; Transponder SL: 25 m
SO226/028-1	10/02/13	7:29	44° 6,43' S	178° 44,90' E	874	NNE 7	244.4	0.4	CTD	CTD	auf Tiefe	SLmax: 872 m
SO226/028-1	10/02/13	7:30	44° 6,43' S	178° 44,90' E	874	NNE 7	265	0.7	CTD	CTD	Hieven	
SO226/028-1	10/02/13	7:55	44° 6,37' S	178° 44,84' E	872	NNE 7	74.3	0.2	CTD	CTD	an Deck	
SO226/028-1	10/02/13	8:00	44° 6,37' S	178° 44,83' E	873	NNE 7	248.2	0.2	CTD	CTD	Ende Station	
SO226/029-1	10/02/13	8:14	44° 6,56' S	178° 45,07' E	876	N 7	94.3	4.9	Vermessung	EM / PS	Beginn Profil	rwK: 090°; d: 11 nm
SO226/029-1	10/02/13	9:37	44° 6,56' S	179° 0,17' E	826	N 6	94.6	7.8	Vermessung	EM / PS	Kursänderung	rwK: 270°; d: 14 nm
SO226/029-1	10/02/13	11:37	44° 8,19' S	178° 40,97' E	927	NNE 7	268.8	8.5	Vermessung	EM / PS	Kursänderung	rwK: 090°; d: 15 nm
SO226/029-1	10/02/13	13:36	44° 9,77' S	178° 59,99' E	900	N 10	96.9	8.1	Vermessung	EM / PS	Kursänderung	rwK: 270°; d: 16 nm
SO226/029-1	10/02/13	15:52	44° 11,39' S	178° 39,64' E	1044	N 10	270.7	8.3	Vermessung	EM / PS	Kursänderung	rwK: 090°; d: 13 nm
SO226/029-1	10/02/13	17:30	44° 13,01' S	178° 52,87' E	1007	N 7	90.8	7.8	Vermessung	EM / PS	Kursänderung	rwK: 307°; d: 12 nm
SO226/029-1	10/02/13	19:00	44° 6,05' S	178° 40,00' E	876	NNE 11	9	2.6	Vermessung	EM / PS	Ende Profil	
SO226/030-1	10/02/13	19:01	44° 6,05' S	178° 40,00' E	875	N 10	16.7	1.2	Kalibrierung	KAL	Beginn Station	
SO226/030-1	10/02/13	19:16	44° 6,01' S	178° 39,98' E	875	NNE 9	37.1	0.3	Kalibrierung	KAL	Transponder z.W.	
SO226/030-1	10/02/13	19:28	44° 6,02' S	178° 39,99' E	874	NNE 9	44.9	0.2	Kalibrierung	KAL	Beginn Drehkreis	d: 3 nm
SO226/030-1	10/02/13	20:40	44° 5,85' S	178° 40,35' E	867	N 9	349.4	2.6	Kalibrierung	KAL	Ende Drehkreis	
SO226/030-1	10/02/13	21:19	44° 6,32' S	178° 40,31' E	880	NNE 10	166.1	1	Kalibrierung	KAL	Transponder a.D.	
SO226/030-1	10/02/13	21:25	44° 6,54' S	178° 40,43' E	885	ENE 13	215.8	2.9	Kalibrierung	KAL	Ende Station	
SO226/031-1	10/02/13	21:59	44° 6,03' S	178° 40,01' E	873	NNE 11	90.9	0.6	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/031-1	10/02/13	22:18	44° 6,01' S	178° 40,01' E	874	NNE 11	4.7	1.1	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/031-1	10/02/13	22:44	44° 6,01' S	178° 39,99' E	874	NNE 12	22.9	0.9	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 859 m
SO226/031-1	10/02/13	22:45	44° 6,00' S	178° 39,99' E	873	NNE 12	347.2	0.9	Piston Corer 9 meter	PC 9M	hieven	
SO226/031-1	10/02/13	23:32	44° 6,00' S	178° 39,97' E	873	NNE 12	157.7	0.5	Piston Corer 9 meter	PC 9M	an Deck	
SO226/031-1	10/02/13	23:45	44° 6,05' S	178° 40,08' E	873	NNE 10	101.6	0.9	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/032-1	11/02/13	1:02	44° 6,66' S	178° 26,51' E	967	NNE 10	32.7	0.3	Side Scan	SSC	Beginn Station	
SO226/032-1	11/02/13	1:30	44° 6,64' S	178° 26,53' E	967	NNE 11	352.4	0.8	Side Scan	SSC	Side Scan z.W.	W 2
SO226/032-1	11/02/13	1:41	44° 6,54' S	178° 26,55' E	960	NNE 11	51.6	0.6	Side Scan	SSC	Gewicht z.W.	
SO226/032-1	11/02/13	3:00	44° 4,42' S	178° 29,02' E	0	NNE 10	26.8	3.4	Side Scan	SSC	Beginn Profil	rwK: 040°; d: 12 nm; SL: 1658 m
SO226/032-1	11/02/13	6:48	43° 55,43' S	178° 39,63' E	589	NNE 11	55.3	2.4	Side Scan	SSC	Kursänderung	rwK: 220°; d: 14 nm; SL: 1730 m
SO226/032-1	11/02/13	11:41	44° 6,49' S	178° 29,27' E	926	N 13	220.5	3	Side Scan	SSC	Kursänderung	rwK: 040°; d: 14 nm; SL: 1796 m
SO226/032-1	11/02/13	16:38	43° 57,30' S	178° 42,63' E	640	WSW 8	67.7	2.7	Side Scan	SSC	Kursänderung	rwK: 220°; d: 15 nm; SL: 1775 m
SO226/032-1	11/02/13	21:34	44° 5,77' S	178° 28,83' E	909	SSE 7	224.8	3.7	Side Scan	SSC	Kursänderung	rwK: 040°; d: 15 nm; SL: 1998 m
SO226/032-1	12/02/13	2:30	43° 56,20' S	178° 42,67' E	610	SSE 5	44.3	2.5	Side Scan	SSC	Kursänderung	rwK: 220°; d: 16 nm; SL: 1851 m
SO226/032-1	12/02/13	7:55	44° 8,40' S	178° 32,08' E	960	NE 4	228.4	3.2	Side Scan	SSC	Kursänderung	rwK: 040°; d: 15 nm; SL: 1910 m
SO226/032-1	12/02/13	13:02	43° 58,60' S	178° 46,46' E	827	N 7	31	3.1	Side Scan	SSC	Kursänderung	rwK: 220°; d: 16 nm; SL: 2122 m
SO226/032-1	12/02/13	18:11	44° 7,64' S	178° 31,87' E	937	NNW 7	232.6	2.1	Side Scan	SSC	Kursänderung	rwK: 040°; d: 14 nm; SL: 1826 m
SO226/032-1	12/02/13	23:12	43° 58,29' S	178° 45,49' E	0	SSW 10	36.8	3.3	Side Scan	SSC	Ende Profil	
SO226/032-1	12/02/13	23:51	43° 59,02' S	178° 46,43' E	740	SSW 13	194.9	1.7	Side Scan	SSC	Gewicht a.D.	
SO226/032-1	12/02/13	23:59	43° 59,18' S	178° 46,44' E	706	SSW 14	217.7	0.9	Side Scan	SSC	Side Scan a. D.	
SO226/032-1	13/02/13	0:15	43° 59,21' S	178° 46,54' E	707	S 12	217.9	2	Side Scan	SSC	Ende Station	
SO226/033-1	13/02/13	1:49	44° 5,72' S	178° 31,23' E	900	SSW 10	52.5	0.3	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/033-1	13/02/13	2:05	44° 5,68' S	178° 31,18' E	900	SW 12	275.2	0.6	Piston Corer 9 meter	PC 9M	zu Wasser	W 6, Transponder SL: 50 m
SO226/033-1	13/02/13	2:29	44° 5,73' S	178° 31,24' E	899	SW 12	341.8	0.3	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 885 m; SZmax: 65 kN
SO226/033-1	13/02/13	3:09	44° 5,70' S	178° 31,13' E	900	SSW 11	332.5	0.6	Piston Corer 9 meter	PC 9M	an Deck	
SO226/033-1	13/02/13	3:09	44° 5,70' S	178° 31,13' E	900	SSW 11	332.5	0.6	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/033-2	13/02/13	3:10	44° 5,70' S	178° 31,13' E	900	SSW 11	225.2	0.3	Piston Corer 6 meter	PC 6M	Beginn Station	
SO226/033-2	13/02/13	4:06	44° 5,73' S	178° 31,23' E	901	SSW 8	211.1	1.5	Piston Corer 6 meter	PC 6M	zu Wasser	W 6; Transponder SL: 50 m
SO226/033-2	13/02/13	4:30	44° 5,74' S	178° 31,22' E	901	SW 8	186.3	0.3	Piston Corer 6 meter	PC 6M	Bodenkontakt	SLmax: 889 m; SZmax: 89 kN
SO226/033-2	13/02/13	5:07	44° 5,71' S	178° 31,26' E	900	SW 6	179.1	0.5	Piston Corer 6 meter	PC 6M	an Deck	

SO226/033-2	13/02/13	5:07	44° 5,71' S	178° 31,26' E	900	SW 6	179.1	0.5	Piston Corer 6 meter	PC 6M	Ende Station	
SO226/033-3	13/02/13	5:08	44° 5,71' S	178° 31,26' E	901	SW 8	262.9	0.4	Piston Corer 6 meter	PC 6M	Beginn Station	
SO226/033-3	13/02/13	6:05	44° 5,72' S	178° 31,26' E	901	WSW 6	355.5	0.9	Piston Corer 6 meter	PC 6M	zu Wasser	W 6; Transponder SL: 50 m
SO226/033-3	13/02/13	6:30	44° 5,73' S	178° 31,23' E	902	SSW 5	5.7	1.1	Piston Corer 6 meter	PC 6M	Bodenkontakt	SLmax: 890 m; SZmax: 76 kN
SO226/033-3	13/02/13	7:05	44° 5,72' S	178° 31,28' E	901	SW 6	226.7	1.1	Piston Corer 6 meter	PC 6M	an Deck	
SO226/033-3	13/02/13	7:39	44° 5,75' S	178° 31,63' E	903	SW 5	102.8	1	Piston Corer 6 meter	PC 6M	Ende Station	
SO226/034-1	13/02/13	7:57	44° 5,69' S	178° 32,27' E	976	SW 4	218.7	0.6	Piston Corer 6 meter	PC 6M	Beginn Station	
SO226/034-1	13/02/13	8:15	44° 5,70' S	178° 32,27' E	976	SW 5	235.3	0.5	Piston Corer 6 meter	PC 6M	zu Wasser	W 6; Transponder SL: 50 m
SO226/034-1	13/02/13	8:29	44° 5,70' S	178° 32,29' E	976	WSW 4	346.2	0.6	Piston Corer 6 meter	PC 6M	Bodenkontakt	SLmax: 957 m
SO226/034-1	13/02/13	10:02	44° 5,66' S	178° 32,29' E	977	SW 5	278.5	0.6	Piston Corer 6 meter	PC 6M	hieven	Gerät hakt; SZmax: 152 kN; Plötz
SO226/034-1	13/02/13	11:10	44° 5,70' S	178° 32,26' E	975	WSW 3	270.8	0.8	Piston Corer 6 meter	PC 6M	an Deck	Lot abgerissen, Schere a.D.
SO226/034-1	13/02/13	11:32	44° 5,73' S	178° 32,34' E	975	WSW 3	217.7	0	Piston Corer 6 meter	PC 6M	Ende Station	
SO226/035-1	13/02/13	12:42	43° 58,48' S	178° 35,61' E	667	W 4	78	7.8	Vermessung	EM / PS	Beginn Profil	rwK: 090°; d: 3 nm
SO226/035-1	13/02/13	13:06	43° 58,47' S	178° 39,50' E	748	WNW 6	71.5	6.3	Vermessung	EM / PS	Kursänderung	rwK: 270°; d: 3 nm
SO226/035-1	13/02/13	13:42	43° 58,49' S	178° 35,19' E	667	WNW 7	239.9	5.3	Vermessung	EM / PS	Kursänderung	rwK: 090°; d: 2 nm
SO226/035-1	13/02/13	14:37	43° 58,47' S	178° 38,71' E	814	W 5	101.8	5.7	Vermessung	EM / PS	Kursänderung	rwK: 020°; d: 1 nm
SO226/035-1	13/02/13	14:47	43° 57,69' S	178° 39,50' E	740	SSW 6	259.2	3.8	Vermessung	EM / PS	Kursänderung	rwK: 270°; d: 2 nm
SO226/035-1	13/02/13	15:14	43° 57,70' S	178° 35,24' E	649	WNW 6	284.9	6.9	Vermessung	EM / PS	Kursänderung	rwK: 060°; d: 2 nm
SO226/035-1	13/02/13	15:30	43° 56,80' S	178° 37,29' E	629	W 5	61.4	6.8	Vermessung	EM / PS	Kursänderung	rwK: 173°; d: 3 nm
SO226/035-1	13/02/13	17:20	43° 59,99' S	178° 38,05' E	792	WNW 5	245.1	2.2	Vermessung	EM / PS	Kursänderung	rwK: 353°; d: 1 nm
SO226/035-1	13/02/13	18:00	43° 58,80' S	178° 37,85' E	777	NW 7	292.9	1.4	Vermessung	EM / PS	Kursänderung	rwK: 064°; d: 2 nm
SO226/035-1	13/02/13	18:27	43° 57,82' S	178° 40,44' E	820	WNW 7	69.3	5	Vermessung	EM / PS	Ende Profil	
SO226/036-1	13/02/13	20:34	43° 59,70' S	178° 43,84' E	721	NNW 4	238	0.9	Vermessung	EM / PS	Beginn Profil	rwK: 005°; d: 3 nm
SO226/036-1	13/02/13	20:59	43° 57,27' S	178° 44,11' E	648	NNW 4	12.3	7.8	Vermessung	EM / PS	Kursänderung	rwK: 309°; d: 5 nm
SO226/036-1	13/02/13	21:36	43° 54,16' S	178° 39,29' E	561	NNW 5	311	8.7	Vermessung	EM / PS	Kursänderung	rwK: 125°; d: 12 nm
SO226/036-1	13/02/13	23:08	43° 59,53' S	178° 52,66' E	666	NW 6	144.5	8.2	Vermessung	EM / PS	Kursänderung	rwK: 123°; d: 2 nm
SO226/036-1	13/02/13	23:21	44° 0,43' S	178° 54,66' E	683	NW 6	115.9	7.9	Vermessung	EM / PS	Kursänderung	rwK: 030°; d: 1 nm
SO226/036-1	13/02/13	23:29	43° 59,66' S	178° 55,35' E	660	NW 7	19.6	8	Vermessung	EM / PS	Kursänderung	rwK: 304°; d: 13 nm
SO226/036-1	14/02/13	1:42	43° 52,37' S	178° 40,87' E	519	NW 5	351.8	6.8	Vermessung	EM / PS	Kursänderung	rwK: 038°; d: 1 nm
SO226/036-1	14/02/13	1:49	43° 51,63' S	178° 41,60' E	505	WNW 6	35.4	7.6	Vermessung	EM / PS	Kursänderung	rwK: 124°; d: 13 nm
SO226/036-1	14/02/13	3:31	43° 59,10' S	178° 57,13' E	638	WNW 6	70.3	5.3	Vermessung	EM / PS	Kursänderung	rwK: 304°; d: 11 nm
SO226/036-1	14/02/13	5:00	43° 52,24' S	178° 45,64' E	519	W 5	307	8.1	Vermessung	EM / PS	Ende Profil	
SO226/037-1	14/02/13	6:05	43° 59,12' S	178° 45,38' E	696	NW 5	349.8	1.7	Multi Corer	MUC	Beginn Station	
SO226/037-1	14/02/13	6:05	43° 59,12' S	178° 45,38' E	696	NW 5	349.8	1.7	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/037-1	14/02/13	6:26	43° 59,10' S	178° 45,35' E	700	NW 6	6.6	0.4	Multi Corer	MUC	Bodenkontakt	SLmax: 705 m; SZmax: 20 kN
SO226/037-1	14/02/13	6:48	43° 59,21' S	178° 45,46' E	703	NNW 5	122.3	1.7	Multi Corer	MUC	an Deck	
SO226/037-1	14/02/13	6:48	43° 59,21' S	178° 45,46' E	703	NNW 5	122.3	1.7	Multi Corer	MUC	Ende Station	
SO226/038-1	14/02/13	7:06	43° 58,99' S	178° 46,10' E	699	NW 6	334.6	0.7	Multi Corer	MUC	Beginn Station	
SO226/038-1	14/02/13	7:08	43° 59,00' S	178° 46,09' E	698	NNW 6	282.8	1.4	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/038-1	14/02/13	7:29	43° 59,02' S	178° 46,05' E	700	NNW 6	193.4	0.1	Multi Corer	MUC	Bodenkontakt	SLmax: 708 m
SO226/038-1	14/02/13	7:48	43° 59,12' S	178° 46,15' E	701	NNW 5	91.5	0.5	Multi Corer	MUC	an Deck	
SO226/038-1	14/02/13	7:51	43° 59,14' S	178° 46,17' E	706	NNW 5	241	1.1	Multi Corer	MUC	Ende Station	
SO226/039-1	14/02/13	8:15	43° 58,91' S	178° 46,75' E	827	NNW 7	139	1.7	Multi Corer	MUC	Beginn Station	
SO226/039-1	14/02/13	8:17	43° 58,91' S	178° 46,75' E	825	NNW 7	341.5	0.6	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/039-1	14/02/13	8:40	43° 58,93' S	178° 46,73' E	828	NNW 7	183.6	1.3	Multi Corer	MUC	Bodenkontakt	SLmax: 836 m; SZmax: 19 kN
SO226/039-1	14/02/13	9:01	43° 59,04' S	178° 46,84' E	821	NNW 5	192.8	1.1	Multi Corer	MUC	an Deck	
SO226/039-1	14/02/13	9:03	43° 59,05' S	178° 46,85' E	819	NNW 5	156.7	1.8	Multi Corer	MUC	Ende Station	
SO226/040-1	14/02/13	9:15	43° 58,89' S	178° 46,96' E	809	NW 6	139.6	0.9	Multi Corer	MUC	Beginn Station	
SO226/040-1	14/02/13	9:18	43° 58,90' S	178° 46,96' E	810	NNW 7	144.3	0.6	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/040-1	14/02/13	9:40	43° 58,90' S	178° 46,96' E	812	NW 7	199.6	1.3	Multi Corer	MUC	Bodenkontakt	SLmax: 814 m; SZmax: 17 KN
SO226/040-1	14/02/13	10:02	43° 59,00' S	178° 46,96' E	821	NNW 7	227.8	1.1	Multi Corer	MUC	an Deck	
SO226/040-1	14/02/13	10:03	43° 59,01' S	178° 46,96' E	820	NNW 6	166	1.8	Multi Corer	MUC	Ende Station	
SO226/041-1	14/02/13	11:25	43° 58,84' S	178° 47,62' E	746	NNW 8	208	0.8	Multi Corer	MUC	Beginn Station	
SO226/041-1	14/02/13	11:28	43° 58,83' S	178° 47,57' E	745	NNW 8	345	1	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/041-1	14/02/13	11:50	43° 58,80' S	178° 47,65' E	740	NW 8	28	0.6	Multi Corer	MUC	Bodenkontakt	SLmax: 751 m
SO226/041-1	14/02/13	12:14	43° 58,96' S	178° 47,68' E	778	NNW 7	93.9	2.1	Multi Corer	MUC	an Deck	
SO226/041-1	14/02/13	12:16	43° 58,98' S	178° 47,68' E	776	NNW 7	342.9	0.6	Multi Corer	MUC	Ende Station	
SO226/042-1	14/02/13	12:42	43° 58,91' S	178° 48,99' E	676	NW 7	306.5	0.5	Multi Corer	MUC	Beginn Station	
SO226/042-1	14/02/13	12:46	43° 58,91' S	178° 48,96' E	679	NW 7	176.1	0.8	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/042-1	14/02/13	13:05	43° 58,90' S	178° 48,88' E	678	WNW 7	196.6	1.2	Multi Corer	MUC	Bodenkontakt	SLmax: 683 m
SO226/042-1	14/02/13	13:29	43° 59,11' S	178° 49,04' E	682	NW 8	60.6	1.5	Multi Corer	MUC	an Deck	
SO226/042-1	14/02/13	13:30	43° 59,12' S	178° 49,04' E	682	NW 7	192.2	1	Multi Corer	MUC	Ende Station	
SO226/043-1	14/02/13	15:27	44° 5,86' S	179° 0,89' E	804	WNW 6	189.3	7.8	Vermessung	EM / PS	Beginn Profil	rwK: 181°; d: 7 nm
SO226/043-1	14/02/13	16:17	44° 12,48' S	179° 0,76' E	975	W 8	146.8	7.2	Vermessung	EM / PS	Kursänderung	rwK: 001°; d: 17 nm
SO226/043-1	14/02/13	18:25	43° 56,55' S	179° 2,43' E	560	SW 7	15.9	8.5	Vermessung	EM / PS	Kursänderung	rwK: 180°; d: 3 nm
SO226/043-1	14/02/13	18:54	43° 58,77' S	179° 3,82' E	638	WSW 8	183.2	7.8	Vermessung	EM / PS	Ende Profil	
SO226/044-1	14/02/13	21:02	43° 58,89' S	178° 48,90' E	679	W 7	4.7	2.2	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/044-1	14/02/13	21:17	43° 58,92' S	178° 48,88' E	680	W 6	178.8	1	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/044-1	14/02/13	21:38	43° 58,85' S	178° 48,87' E	679	W 7	201.3	1.4	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 662 m
SO226/044-1	14/02/13	21:40	43° 58,85' S	178° 48,87' E	677	W 7	356.9	1.3	Piston Corer 9 meter	PC 9M	hieven	SZmax: 41 kN
SO226/044-1	14/02/13	22:14	43° 58,97' S	178° 48,85' E	681	WSW 8	58.2	0.7	Piston Corer 9 meter	PC 9M	an Deck	
SO226/044-1	14/02/13	22:27	43° 59,00' S	178° 48,89' E	684	WSW 8	279.3	1.6	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/045-1	14/02/13	23:30	43° 58,83' S	178° 47,62' E	748	W 7	147.7	1.3	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/045-1	14/02/13	23:46	43° 58,83' S	178° 47,61' E	746	W 7	193.3	0.3	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/045-1	15/02/13	0:08	43° 58,87' S	178° 47,55' E	747	WSW 8	329.6	0.7	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 735 m; SZmax: 35 kN

SO226/045-1	15/02/13	0:44	43° 59,39' S	178° 47,82' E	722	W 8	198.8	1.7	Piston Corer 9 meter	PC 9M	an Deck	
SO226/045-1	15/02/13	1:30	44° 0,21' S	178° 48,12' E	738	WSW 7	194.6	1.2	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/045-2	15/02/13	2:00	43° 58,28' S	178° 47,73' E	708	SW 8	146.9	1.8	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/045-2	15/02/13	2:16	43° 58,74' S	178° 47,87' E	15	WSW 8	194.5	1.7	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/045-2	15/02/13	2:40	43° 58,81' S	178° 47,62' E	743	WSW 7	122	1.5	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 730 m; SZmax: 40 kN
SO226/045-2	15/02/13	3:15	43° 59,12' S	178° 47,94' E	708	WSW 6	136.3	0.8	Piston Corer 9 meter	PC 9M	an Deck	
SO226/045-2	15/02/13	3:15	43° 59,12' S	178° 47,94' E	708	WSW 6	136.3	0.8	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/046-1	15/02/13	4:06	43° 58,91' S	178° 46,96' E	811	W 7	217	1.5	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/046-1	15/02/13	4:06	43° 58,91' S	178° 46,96' E	811	W 7	217	1.5	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/046-1	15/02/13	4:29	43° 58,91' S	178° 46,93' E	810	W 8	342.1	1.7	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 800 m; SZmax: 25 kN
SO226/046-1	15/02/13	5:05	43° 58,87' S	178° 47,00' E	807	W 7	209.5	0.4	Piston Corer 9 meter	PC 9M	an Deck	
SO226/046-1	15/02/13	5:05	43° 58,87' S	178° 47,00' E	807	W 7	209.5	0.4	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/047-1	15/02/13	6:28	43° 58,92' S	178° 46,73' E	827	WSW 7	93.1	0.3	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/047-1	15/02/13	6:28	43° 58,92' S	178° 46,73' E	827	WSW 7	93.1	0.3	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/047-1	15/02/13	6:50	43° 58,92' S	178° 46,72' E	825	WSW 8	161.6	0.8	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 809 m; SZmax: 28 kN
SO226/047-1	15/02/13	7:25	43° 58,93' S	178° 46,72' E	825	WSW 9	190.3	0.8	Piston Corer 9 meter	PC 9M	an Deck	
SO226/047-1	15/02/13	8:44	43° 58,93' S	178° 46,74' E	825	W 8	139.1	0.7	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/048-1	15/02/13	9:18	43° 58,88' S	178° 47,22' E	781	W 7	230.2	0.3	Multi Corer	MUC	Beginn Station	
SO226/048-1	15/02/13	9:20	43° 58,88' S	178° 47,22' E	782	W 7	195.1	0.4	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/048-1	15/02/13	9:41	43° 58,90' S	178° 47,21' E	782	W 6	54.3	0.9	Multi Corer	MUC	Bodenkontakt	SLmax: 792 m; SZmax: 15 KN
SO226/048-1	15/02/13	10:05	43° 58,93' S	178° 47,21' E	791	W 7	205.4	0.5	Multi Corer	MUC	an Deck	
SO226/048-1	15/02/13	10:06	43° 58,93' S	178° 47,21' E	787	W 7	199.1	1.2	Multi Corer	MUC	Ende Station	
SO226/049-1	15/02/13	10:55	43° 58,79' S	178° 47,83' E	750	W 4	285.1	0.9	Multi Corer	MUC	Beginn Station	
SO226/049-1	15/02/13	10:59	43° 58,79' S	178° 47,83' E	740	W 5	1.7	1	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/049-1	15/02/13	11:19	43° 58,82' S	178° 47,81' E	755	WSW 3	248	1.2	Multi Corer	MUC	Bodenkontakt	SLmax: 758 m
SO226/049-1	15/02/13	11:45	43° 58,82' S	178° 47,93' E	730	W 4	158	0.4	Multi Corer	MUC	an Deck	
SO226/049-1	15/02/13	11:47	43° 58,82' S	178° 47,94' E	725	W 4	225	1.6	Multi Corer	MUC	Ende Station	
SO226/050-1	15/02/13	12:14	43° 57,97' S	178° 47,53' E	702	W 5	208.5	1.2	Multi Corer	MUC	Beginn Station	
SO226/050-1	15/02/13	12:18	43° 57,97' S	178° 47,55' E	700	W 6	94.3	0.3	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/050-1	15/02/13	12:36	43° 57,95' S	178° 47,62' E	702	WNW 5	235.8	1.6	Multi Corer	MUC	Bodenkontakt	SLmax: 712 m
SO226/050-1	15/02/13	12:59	43° 58,09' S	178° 47,68' E	701	WNW 5	153.5	0.7	Multi Corer	MUC	an Deck	
SO226/050-1	15/02/13	13:00	43° 58,09' S	178° 47,69' E	704	W 4	251.6	1.7	Multi Corer	MUC	Ende Station	
SO226/050-2	15/02/13	13:01	43° 58,10' S	178° 47,69' E	701	WNW 3	251.8	1.4	Multi Corer	MUC	Beginn Station	
SO226/050-2	15/02/13	13:15	43° 57,98' S	178° 47,59' E	700	WSW 6	31.5	1.2	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/050-2	15/02/13	13:34	43° 57,95' S	178° 47,60' E	700	WSW 6	68.6	0.9	Multi Corer	MUC	Bodenkontakt	SLmax: 715 m
SO226/050-2	15/02/13	13:57	43° 58,23' S	178° 47,61' E	706	WSW 4	69.2	1.5	Multi Corer	MUC	an Deck	
SO226/050-2	15/02/13	13:58	43° 58,25' S	178° 47,62' E	707	WSW 4	90.9	0.8	Multi Corer	MUC	Ende Station	
SO226/051-1	15/02/13	14:19	43° 58,23' S	178° 46,82' E	1012	WSW 6	257.2	1	Multi Corer	MUC	Beginn Station	
SO226/051-1	15/02/13	14:23	43° 58,23' S	178° 46,84' E	1048	W 5	162.6	0.9	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/051-1	15/02/13	15:05	43° 58,22' S	178° 46,80' E	1079	WSW 6	76	2.3	Multi Corer	MUC	Bodenkontakt	SLmax: 784 m; SZmax: 18 kN
SO226/051-1	15/02/13	15:31	43° 58,17' S	178° 46,88' E	754	WNW 4	278	0.2	Multi Corer	MUC	an Deck	
SO226/051-1	15/02/13	15:31	43° 58,17' S	178° 46,88' E	754	WNW 4	278	0.2	Multi Corer	MUC	Ende Station	
SO226/051-2	15/02/13	15:32	43° 58,17' S	178° 46,88' E	755	WNW 5	350.5	0.5	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/051-2	15/02/13	16:26	43° 58,22' S	178° 46,81' E	771	WNW 4	178.2	0.5	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/051-2	15/02/13	16:46	43° 58,20' S	178° 46,80' E	775	NW 5	111.4	0.2	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 753 m; SZmax: 48 kN
SO226/051-2	15/02/13	17:22	43° 58,16' S	178° 46,82' E	762	NW 6	52.6	0.7	Piston Corer 9 meter	PC 9M	an Deck	
SO226/051-2	15/02/13	17:22	43° 58,16' S	178° 46,82' E	762	NW 6	52.6	0.7	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/052-1	15/02/13	19:14	43° 57,94' S	178° 47,58' E	700	NW 4	276.8	0.2	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/052-1	15/02/13	19:28	43° 57,95' S	178° 47,60' E	702	NW 3	251.8	0.7	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/052-1	15/02/13	19:50	43° 57,96' S	178° 47,60' E	700	NW 3	203.6	0.6	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 688 m; SZmax: 41 kN
SO226/052-1	15/02/13	19:52	43° 57,97' S	178° 47,59' E	701	NW 4	246.3	0.4	Piston Corer 9 meter	PC 9M	hieven	
SO226/052-1	15/02/13	20:23	43° 57,99' S	178° 47,62' E	703	NNW 3	99.4	0.8	Piston Corer 9 meter	PC 9M	an Deck	
SO226/052-1	15/02/13	21:03	43° 58,07' S	178° 47,55' E	703	NNW 3	132.7	0.9	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/053-1	15/02/13	21:32	43° 58,78' S	178° 47,89' E	732	NNW 4	258.4	0.3	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/053-1	15/02/13	21:47	43° 58,78' S	178° 47,84' E	737	NNW 4	87.5	0.8	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/053-1	15/02/13	22:09	43° 58,81' S	178° 47,87' E	742	NNW 5	296.6	1.6	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 714 m; SZmax: 35 kN
SO226/053-1	15/02/13	22:42	43° 58,82' S	178° 47,82' E	749	NW 7	199	1.3	Piston Corer 9 meter	PC 9M	an Deck	
SO226/053-1	15/02/13	23:00	43° 58,80' S	178° 47,75' E	744	NNW 8	183.7	1.5	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/054-1	15/02/13	23:54	43° 58,90' S	178° 47,24' E	788	NNW 8	0	0.6	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/054-1	16/02/13	0:09	43° 58,90' S	178° 47,23' E	780	NNW 9	232.2	1.3	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/054-1	16/02/13	0:30	43° 58,88' S	178° 47,20' E	786	NNW 7	206.6	0.8	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 769 m; SZmax: 50 kN
SO226/054-1	16/02/13	1:00	43° 58,89' S	178° 47,18' E	784	NNW 8	245.1	0.4	Piston Corer 9 meter	PC 9M	an Deck	
SO226/054-1	16/02/13	1:30	43° 58,85' S	178° 47,10' E	1023	NNW 7	316.3	1.2	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/055-1	16/02/13	2:23	43° 58,91' S	178° 48,90' E	680	NW 5	234.9	0.2	Ocean Floor Observation System	OFOS	Beginn Station	
SO226/055-1	16/02/13	2:39	43° 59,05' S	178° 48,99' E	680	NW 7	158.9	1.2	Ocean Floor Observation System	OFOS	zu Wasser	W 2
SO226/055-1	16/02/13	3:00	43° 58,94' S	178° 48,97' E	676	NNW 7	192.9	1	Ocean Floor Observation System	OFOS	Bodensicht	SLmax: 673 m; rwK: 275°, d: 1 n
SO226/055-1	16/02/13	5:11	43° 58,82' S	178° 47,58' E	741	NW 9	207.3	0.9	Ocean Floor Observation System	OFOS	Kursänderung	rwk: 260°, d: 2 nm
SO226/055-1	16/02/13	9:05	43° 59,10' S	178° 45,34' E	699	W 8	1.1	0.4	Ocean Floor Observation System	OFOS	Beginn hieven	
SO226/055-1	16/02/13	9:25	43° 59,13' S	178° 45,44' E	698	W 9	59.2	0.8	Ocean Floor Observation System	OFOS	an Deck	
SO226/055-1	16/02/13	9:33	43° 59,14' S	178° 45,42' E	699	WSW 10	160.6	0.2	Ocean Floor Observation System	OFOS	Ende Station	
SO226/056-1	16/02/13	10:38	43° 53,28' S	178° 50,13' E	525	WSW 12	122.8	7.5	Vermessung	EM / PS	Beginn Profil	rwK: 124°; d: 9 nm
SO226/056-1	16/02/13	11:44	43° 58,11' S	179° 0,29' E	613	WSW 8	110.5	8.2	Vermessung	EM / PS	Kursänderung	rwK: 109°; d: 7 nm
SO226/056-1	16/02/13	12:35	44° 0,34' S	179° 9,40' E	736	WSW 12	111.3	8.2	Vermessung	EM / PS	Kursänderung	rwK: 002°; d: 1 nm
SO226/056-1	16/02/13	12:47	43° 59,15' S	179° 9,59' E	601	SW 11	26.8	5.7	Vermessung	EM / PS	Kursänderung	rwK: 122°; d: 2 nm
SO226/056-1	16/02/13	13:01	43° 59,94' S	179° 11,34' E	615	WSW 8	149.8	7.1	Vermessung	EM / PS	Kursänderung	rwK: 178°; d: 2 nm

SO226/056-1	16/02/13	13:18	44° 1,97' S	179° 11,38' E	761	WSW 12	232	7.4	Vermessung	EM / PS	Kursänderung	rwK: 271°; d: 5 nm
SO226/056-1	16/02/13	13:54	44° 1,96' S	179° 4,86' E	717	WSW 11	272.4	8.6	Vermessung	EM / PS	Kursänderung	rwK: 192°; d: 3 nm
SO226/056-1	16/02/13	14:15	44° 4,47' S	179° 3,92' E	771	WSW 11	190.8	6.9	Vermessung	EM / PS	Kursänderung	rwK: 086°; d: 6 nm
SO226/056-1	16/02/13	15:00	44° 4,04' S	179° 11,98' E	743	S 10	8.5	6.4	Vermessung	EM / PS	Kursänderung	rwK: 009°; d: 4 nm
SO226/056-1	16/02/13	15:28	44° 0,36' S	179° 12,84' E	629	WSW 13	9	7.3	Vermessung	EM / PS	Kursänderung	rwK: 187°; d: 6 nm
SO226/056-1	16/02/13	16:23	44° 5,37' S	179° 13,45' E	753	WSW 14	231.4	3.7	Vermessung	EM / PS	Kursänderung	rwK: 267°; d: 8 nm
SO226/056-1	16/02/13	17:31	44° 5,84' S	179° 2,15' E	800	SW 12	267.8	6.6	Vermessung	EM / PS	Kursänderung	rwK: 275°; d: 5 nm
SO226/056-1	16/02/13	18:08	44° 5,43' S	178° 55,90' E	815	SW 10	302.8	7.4	Vermessung	EM / PS	Kursänderung	rwK: 322°; d: 3 nm
SO226/056-1	16/02/13	18:34	44° 2,71' S	178° 52,95' E	761	SSW 12	280.6	6.5	Vermessung	EM / PS	Kursänderung	rwK: 272°; d: 7 nm
SO226/056-1	16/02/13	19:29	44° 2,47' S	178° 43,54' E	778	WSW 9	275.2	7.3	Vermessung	EM / PS	Kursänderung	rwK: 282°; d: 6 nm
SO226/056-1	16/02/13	20:13	44° 1,31' S	178° 35,68' E	758	SSW 10	277.8	7.2	Vermessung	EM / PS	Ende Profil	
SO226/057-1	16/02/13	22:10	43° 56,90' S	178° 35,10' E	0	SW 11	129.2	2.6	Gravity Corer 3 meter	GC 3M	Beginn Station	
SO226/057-1	16/02/13	22:21	43° 56,90' S	178° 35,10' E	0	SSW 8	237.6	1	Gravity Corer 3 meter	GC 3M	zu Wasser	W 6
SO226/057-1	16/02/13	22:31	43° 56,91' S	178° 35,13' E	634	SW 10	330.6	0.1	Gravity Corer 3 meter	GC 3M	Bodenkontakt	SLmax: 647 m; SZmax: 41 kN
SO226/057-1	16/02/13	22:53	43° 56,90' S	178° 35,13' E	634	SSW 9	155.4	0.6	Gravity Corer 3 meter	GC 3M	an Deck	
SO226/057-1	16/02/13	23:00	43° 56,94' S	178° 35,10' E	634	SW 10	297.5	1.3	Gravity Corer 3 meter	GC 3M	Ende Station	
SO226/058-1	17/02/13	0:24	44° 6,01' S	178° 31,53' E	906	SW 8	220.3	1.5	Gravity Corer 3 meter	GC 3M	Beginn Station	
SO226/058-1	17/02/13	0:33	44° 6,01' S	178° 31,52' E	908	SSW 9	98.3	0.3	Gravity Corer 3 meter	GC 3M	zu Wasser	W 6
SO226/058-1	17/02/13	0:51	44° 6,03' S	178° 31,48' E	908	S 8	292.1	0.4	Gravity Corer 3 meter	GC 3M	Bodenkontakt	SLmax: 914 m; SZmax: 32 kN
SO226/058-1	17/02/13	1:25	44° 6,06' S	178° 31,56' E	909	SSW 6	59.9	0.5	Gravity Corer 3 meter	GC 3M	an Deck	
SO226/058-1	17/02/13	1:37	44° 6,08' S	178° 31,58' E	908	SSW 6	350.6	0.3	Gravity Corer 3 meter	GC 3M	Ende Station	
SO226/059-1	17/02/13	2:17	44° 7,59' S	178° 36,28' E	929	SSW 7	209.8	0.6	Gravity Corer 3 meter	GC 3M	Beginn Station	
SO226/059-1	17/02/13	2:24	44° 7,60' S	178° 36,27' E	928	SSW 5	93.4	0.9	Gravity Corer 3 meter	GC 3M	zu Wasser	W 6
SO226/059-1	17/02/13	2:44	44° 7,60' S	178° 36,22' E	930	SSW 6	39.8	0.4	Gravity Corer 3 meter	GC 3M	Bodenkontakt	SLmax: 932 m; SZmax: 36 kN
SO226/059-1	17/02/13	3:14	44° 7,59' S	178° 36,24' E	929	SW 6	5.6	1.2	Gravity Corer 3 meter	GC 3M	an Deck	
SO226/059-1	17/02/13	3:14	44° 7,59' S	178° 36,24' E	929	SW 6	5.6	1.2	Gravity Corer 3 meter	GC 3M	Ende Station	
SO226/060-1	17/02/13	4:10	44° 11,23' S	178° 36,36' E	1032	SW 7	297.5	0.3	Gravity Corer 3 meter	GC 3M	Beginn Station	
SO226/060-1	17/02/13	4:10	44° 11,23' S	178° 36,36' E	1032	SW 7	297.5	0.3	Gravity Corer 3 meter	GC 3M	zu Wasser	W 6
SO226/060-1	17/02/13	4:34	44° 11,24' S	178° 36,34' E	1038	SSW 7	207.1	0.2	Gravity Corer 3 meter	GC 3M	Bodenkontakt	SLmax: 1044 m; SZmax: 26 kN
SO226/060-1	17/02/13	5:06	44° 11,25' S	178° 36,52' E	1042	SSW 7	63.6	0.1	Gravity Corer 3 meter	GC 3M	an Deck	
SO226/060-1	17/02/13	5:06	44° 11,25' S	178° 36,52' E	1042	SSW 7	63.6	0.1	Gravity Corer 3 meter	GC 3M	Ende Station	
SO226/061-1	17/02/13	6:14	44° 5,73' S	178° 31,24' E	899	SW 7	347	0.9	Multi Corer	MUC	Beginn Station	
SO226/061-1	17/02/13	6:14	44° 5,73' S	178° 31,24' E	899	SW 7	347	0.9	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/061-1	17/02/13	6:39	44° 5,75' S	178° 31,20' E	903	SW 6	161.5	1.1	Multi Corer	MUC	Bodenkontakt	SLmax: 908 m; SZmax: 25 kN
SO226/061-1	17/02/13	7:04	44° 5,71' S	178° 31,21' E	904	SW 6	41.6	0.3	Multi Corer	MUC	an Deck	
SO226/061-1	17/02/13	7:09	44° 5,69' S	178° 31,18' E	903	S 8	243.7	0.2	Multi Corer	MUC	Ende Station	
SO226/062-1	17/02/13	7:51	44° 6,59' S	178° 35,65' E	986	S 5	165.8	0.6	Multi Corer	MUC	Beginn Station	
SO226/062-1	17/02/13	7:59	44° 6,60' S	178° 35,63' E	987	S 6	187.6	0.1	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/062-1	17/02/13	8:25	44° 6,60' S	178° 35,62' E	986	S 5	184	0.2	Multi Corer	MUC	Bodenkontakt	SLmax: 993 m; SZmax: 22 kN
SO226/062-1	17/02/13	8:51	44° 6,61' S	178° 35,66' E	988	S 5	37.6	0.7	Multi Corer	MUC	an Deck	
SO226/062-1	17/02/13	8:51	44° 6,61' S	178° 35,66' E	988	S 5	37.6	0.7	Multi Corer	MUC	Ende Station	
SO226/062-2	17/02/13	8:51	44° 6,61' S	178° 35,66' E	988	S 5	37.6	0.7	Multi Corer	MUC	Beginn Station	
SO226/062-2	17/02/13	8:58	44° 6,60' S	178° 35,65' E	987	S 4	144.8	0.9	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/062-2	17/02/13	9:23	44° 6,60' S	178° 35,63' E	984	S 7	340.1	1.5	Multi Corer	MUC	Bodenkontakt	SLmax: 992 m; SZmax: 19 kN
SO226/062-2	17/02/13	9:50	44° 6,60' S	178° 35,69' E	988	S 5	70.9	1.5	Multi Corer	MUC	an Deck	
SO226/062-2	17/02/13	9:52	44° 6,59' S	178° 35,69' E	988	S 6	316	0.8	Multi Corer	MUC	Ende Station	
SO226/063-1	17/02/13	10:36	44° 6,02' S	178° 40,00' E	877	SSW 4	236.4	1.3	Multi Corer	MUC	Beginn Station	
SO226/063-1	17/02/13	10:40	44° 6,05' S	178° 40,02' E	878	SW 5	233.1	0.4	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/063-1	17/02/13	11:02	44° 6,05' S	178° 40,02' E	878	SW 4	284.4	0.5	Multi Corer	MUC	Bodenkontakt	SLmax: 882 m
SO226/063-1	17/02/13	11:27	44° 6,02' S	178° 40,01' E	877	SSW 4	128.4	0.8	Multi Corer	MUC	an Deck	
SO226/063-1	17/02/13	11:29	44° 6,02' S	178° 40,01' E	876	S 4	334.6	0.3	Multi Corer	MUC	Ende Station	
SO226/063-2	17/02/13	11:30	44° 6,02' S	178° 40,01' E	879	S 4	27.7	0.5	Multi Corer	MUC	Beginn Station	
SO226/063-2	17/02/13	11:33	44° 6,02' S	178° 40,01' E	877	SSW 3	226.5	0.3	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/063-2	17/02/13	11:56	44° 6,05' S	178° 40,00' E	878	SSW 4	355.2	0.8	Multi Corer	MUC	Bodenkontakt	SLmax: 882 m
SO226/063-2	17/02/13	12:19	44° 6,04' S	178° 39,98' E	880	S 3	136	0.3	Multi Corer	MUC	an Deck	
SO226/063-2	17/02/13	12:21	44° 6,05' S	178° 39,98' E	876	SSW 4	100.2	1.4	Multi Corer	MUC	Ende Station	
SO226/064-1	17/02/13	13:30	43° 58,92' S	178° 46,74' E	826	SSW 3	65.5	0.2	Multi Corer	MUC	Beginn Station	
SO226/064-1	17/02/13	13:33	43° 58,92' S	178° 46,68' E	826	S 5	255.2	0.8	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/064-1	17/02/13	13:57	43° 58,92' S	178° 46,74' E	826	SW 4	45.9	0.4	Multi Corer	MUC	Bodenkontakt	SLmax: 828 m
SO226/064-1	17/02/13	14:19	43° 58,91' S	178° 46,74' E	827	SW 5	218.2	1.9	Multi Corer	MUC	an Deck	
SO226/064-1	17/02/13	14:22	43° 58,93' S	178° 46,76' E	826	WSW 6	37.9	1.1	Multi Corer	MUC	Ende Station	
SO226/064-2	17/02/13	14:23	43° 58,93' S	178° 46,75' E	824	SW 6	95.8	2.4	Multi Corer	MUC	Beginn Station	
SO226/064-2	17/02/13	14:26	43° 58,94' S	178° 46,75' E	824	SW 5	114.4	0.4	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/064-2	17/02/13	14:49	43° 58,99' S	178° 46,67' E	825	WSW 5	210.4	0.6	Multi Corer	MUC	Bodenkontakt	SLmax: 826 m
SO226/064-2	17/02/13	15:17	43° 59,31' S	178° 46,54' E	709	S 3	261.8	0.8	Multi Corer	MUC	an Deck	
SO226/064-2	17/02/13	15:17	43° 59,31' S	178° 46,54' E	709	S 3	261.8	0.8	Multi Corer	MUC	Ende Station	
SO226/065-1	17/02/13	16:18	44° 1,29' S	178° 35,51' E	756	SSW 6	276.3	7.9	Vermessung	EM / PS	Beginn Profil	rwK: 282°; d: 6 nm
SO226/065-1	17/02/13	17:05	44° 0,01' S	178° 27,12' E	751	SSW 4	272.9	7.9	Vermessung	EM / PS	Kursänderung	rwK: 265°; d: 11 nm
SO226/065-1	17/02/13	18:31	44° 1,06' S	178° 11,37' E	845	SSW 6	203	4.9	Vermessung	EM / PS	Kursänderung	rwK: 279°; d: 8 nm
SO226/065-1	17/02/13	19:27	44° 1,19' S	178° 3,74' E	870	WSW 4	272.3	7.8	Vermessung	EM / PS	Kursänderung	rwK: 151°; d: 3 nm
SO226/065-1	17/02/13	19:53	44° 3,94' S	178° 5,50' E	938	WSW 4	168.5	7.2	Vermessung	EM / PS	Kursänderung	rwK: 106°; d: 10 nm
SO226/065-1	17/02/13	21:08	44° 6,85' S	178° 18,73' E	1006	WSW 5	119.4	7.9	Vermessung	EM / PS	Kursänderung	rwK: 265°; d: 12 nm
SO226/065-1	17/02/13	22:43	44° 8,02' S	178° 3,01' E	1063	WSW 5	271.6	8.5	Vermessung	EM / PS	Kursänderung	rwK: 261°; d: 34 nm
SO226/065-1	18/02/13	3:06	44° 13,39' S	177° 15,34' E	942	W 4	203.6	5.5	Vermessung	EM / PS	Kursänderung	rwK: 179°; d: 4 nm
SO226/065-1	18/02/13	3:33	44° 16,96' S	177° 15,42' E	1100	W 6	110.2	5.5	Vermessung	EM / PS	Kursänderung	rwK: 081°; d: 12 nm

SO226/065-1	18/02/13	5:01	44° 15,00' S	177° 31,72' E	1024	W 4	55.3	7.3	Vermessung	EM / PS	Kursänderung	rwK: 347°; d: 5 nm
SO226/065-1	18/02/13	5:40	44° 10,06' S	177° 30,15' E	973	WSW 4	300.9	4.2	Vermessung	EM / PS	Kursänderung	rwK: 259°; d: 14 nm
SO226/065-1	18/02/13	7:26	44° 12,73' S	177° 11,01' E	892	WNW 2	257.4	8.2	Vermessung	EM / PS	Ende Profil	
SO226/066-1	18/02/13	8:09	44° 14,01' S	177° 15,30' E	955	W 3	202.7	0.6	CTD	CTD	Beginn Station	
SO226/066-1	18/02/13	8:11	44° 14,02' S	177° 15,29' E	954	W 1	287.4	0.2	CTD	CTD	zu Wasser	W 4
SO226/066-1	18/02/13	8:38	44° 14,02' S	177° 15,33' E	956	WNW 1	114.2	0.8	CTD	CTD	auf Tiefe	SLmax: 952 m
SO226/066-1	18/02/13	8:48	44° 14,07' S	177° 15,40' E	957	WNW 3	126.6	1	CTD	CTD	Hieven	
SO226/066-1	18/02/13	9:20	44° 14,29' S	177° 15,71' E	962	WNW 2	189.4	1	CTD	CTD	an Deck	
SO226/066-1	18/02/13	9:23	44° 14,32' S	177° 15,73' E	964	WNW 2	242.8	0.2	CTD	CTD	Ende Station	
SO226/067-1	18/02/13	9:32	44° 14,38' S	177° 15,71' E	965	WNW 2	185.8	1	Side Scan	SSC	Beginn Station	
SO226/067-1	18/02/13	9:35	44° 14,39' S	177° 15,67' E	962	WNW 3	236.6	0.6	Side Scan	SSC	Side Scan z.W.	W 2
SO226/067-1	18/02/13	9:45	44° 14,42' S	177° 15,63' E	964	WNW 3	242	0.5	Side Scan	SSC	Gewicht z.W.	
SO226/067-1	18/02/13	10:45	44° 15,02' S	177° 12,59' E	965	WNW 2	262.4	3.2	Side Scan	SSC	Beginn Profil	rwK: 242°; d: 13 nm
SO226/067-1	18/02/13	15:00	44° 21,05' S	176° 56,58' E	1029	NW 6	234.6	3.1	Side Scan	SSC	Kursänderung	rwK: 062°; d: 15 nm; SL: 2165 m
SO226/067-1	18/02/13	19:58	44° 15,79' S	177° 14,72' E	1017	W 4	72.1	3	Side Scan	SSC	Kursänderung	rwK: 242°; d: 16 nm; SL: 2235 m
SO226/067-1	19/02/13	1:29	44° 20,79' S	176° 55,27' E	991	NNW 2	223.6	3	Side Scan	SSC	Kursänderung	rwK: 062°; d: 16 nm;,SL: 2026 m
SO226/067-1	19/02/13	6:45	44° 15,11' S	177° 14,33' E	981	NNE 5	59.3	2.8	Side Scan	SSC	Kursänderung	rwK: 242°; d: 18 nm; SL: 2212 m
SO226/067-1	19/02/13	12:43	44° 19,87' S	176° 53,61' E	960	NNE 8	250.6	3.5	Side Scan	SSC	Kursänderung	rwK: 062°; d: 15 nm; SL: 1641 m
SO226/067-1	19/02/13	17:58	44° 11,74' S	177° 10,96' E	871	N 8	56.5	3.2	Side Scan	SSC	Kursänderung	rwK: 242°; d: 16 nm; SL: 2282 m
SO226/067-1	19/02/13	23:33	44° 20,29' S	176° 54,49' E	974	N 8	212.7	2.8	Side Scan	SSC	Kursänderung	rwK: 062°; d: 15 nm; SL: 1810 m
SO226/067-1	20/02/13	4:29	44° 12,62' S	177° 10,52' E	888	N 7	56.5	3.4	Side Scan	SSC	Ende Profil	
SO226/067-1	20/02/13	5:14	44° 11,63' S	177° 12,52' E	877	N 7	333.3	0.7	Side Scan	SSC	Gewicht a.D.	
SO226/067-1	20/02/13	5:22	44° 11,52' S	177° 12,59' E	872	NNE 8	13.4	1.7	Side Scan	SSC	Side Scan a. D.	
SO226/067-1	20/02/13	5:22	44° 11,52' S	177° 12,59' E	872	NNE 8	13.4	1.7	Side Scan	SSC	Ende Station	
SO226/068-1	20/02/13	6:08	44° 14,39' S	177° 11,16' E	935	NNE 5	304.8	0.3	Multi Corer	MUC	Beginn Station	
SO226/068-1	20/02/13	6:08	44° 14,39' S	177° 11,16' E	935	NNE 5	304.8	0.3	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/068-1	20/02/13	6:32	44° 14,34' S	177° 11,17' E	933	NNE 8	258.6	1.3	Multi Corer	MUC	Bodenkontakt	SLmax: 943 m; SZmax: 20 kN
SO226/068-1	20/02/13	7:00	44° 14,34' S	177° 11,09' E	934	NNE 8	45.1	0.7	Multi Corer	MUC	an Deck	
SO226/068-1	20/02/13	7:00	44° 14,34' S	177° 11,09' E	934	NNE 8	45.1	0.7	Multi Corer	MUC	Ende Station	
SO226/069-1	20/02/13	7:22	44° 14,39' S	177° 10,39' E	968	NE 9	298.9	0.9	Multi Corer	MUC	Beginn Station	
SO226/069-1	20/02/13	7:26	44° 14,37' S	177° 10,40' E	966	NNE 9	86.2	1.5	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/069-1	20/02/13	7:50	44° 14,37' S	177° 10,38' E	967	NNE 7	208.1	0.6	Multi Corer	MUC	Bodenkontakt	SLmax: 968 m; SZmax: 22 kN
SO226/069-1	20/02/13	8:14	44° 14,39' S	177° 10,27' E	972	NNE 9	335.7	0.9	Multi Corer	MUC	an Deck	
SO226/069-1	20/02/13	8:17	44° 14,38' S	177° 10,28' E	971	NNE 9	82	1	Multi Corer	MUC	Ende Station	
SO226/070-1	20/02/13	8:18	44° 14,38' S	177° 10,28' E	971	NNE 9	96.6	0.9	Multi Corer	MUC	Beginn Station	
SO226/070-1	20/02/13	8:22	44° 14,38' S	177° 10,28' E	971	NNE 9	92.9	0.8	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/070-1	20/02/13	8:39	44° 14,37' S	177° 10,29' E	971	N 7	328.2	0.8	Multi Corer	MUC	Bodenkontakt	SLmax: 970 m; SZmax: 20kN
SO226/070-1	20/02/13	9:09	44° 14,35' S	177° 10,32' E	968	N 7	118.2	0.8	Multi Corer	MUC	an Deck	
SO226/070-1	20/02/13	9:12	44° 14,38' S	177° 10,33' E	970	N 7	191.9	0.7	Multi Corer	MUC	Ende Station	
SO226/070-2	20/02/13	9:19	44° 14,35' S	177° 10,31' E	969	N 8	277.8	0.9	Multi Corer	MUC	Beginn Station	
SO226/070-2	20/02/13	9:25	44° 14,37' S	177° 10,31' E	968	NNE 8	10.4	1.1	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/070-2	20/02/13	9:51	44° 14,39' S	177° 10,31' E	971	N 6	123.6	0.7	Multi Corer	MUC	Bodenkontakt	SLmax: 972 m; Szmax: 20 kN
SO226/070-2	20/02/13	10:10	44° 14,34' S	177° 10,24' E	971	N 7	83.9	0.9	Multi Corer	MUC	an Deck	
SO226/070-2	20/02/13	10:11	44° 14,34' S	177° 10,24' E	972	N 7	86	0.5	Multi Corer	MUC	Ende Station	
SO226/071-1	20/02/13	10:49	44° 14,40' S	177° 9,04' E	968	N 7	40.8	0.8	Multi Corer	MUC	Beginn Station	
SO226/071-1	20/02/13	10:53	44° 14,39' S	177° 9,02' E	968	N 7	78.7	0.2	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/071-1	20/02/13	11:17	44° 14,38' S	177° 9,01' E	967	N 7	28.2	0.3	Multi Corer	MUC	Bodenkontakt	SLmax: 971 m
SO226/071-1	20/02/13	11:43	44° 14,44' S	177° 8,89' E	969	NNE 9	115.6	1	Multi Corer	MUC	an Deck	
SO226/071-1	20/02/13	11:44	44° 14,45' S	177° 8,87' E	970	N 9	235.8	1.3	Multi Corer	MUC	Ende Station	
SO226/072-1	20/02/13	11:54	44° 14,40' S	177° 8,54' E	962	N 8	354	0.3	Multi Corer	MUC	Beginn Station	
SO226/072-1	20/02/13	11:56	44° 14,39' S	177° 8,54' E	961	N 8	355.9	0.2	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/072-1	20/02/13	12:19	44° 14,38' S	177° 8,55' E	960	N 9	213.3	0.3	Multi Corer	MUC	Bodenkontakt	SLmax: 966 m
SO226/072-1	20/02/13	12:44	44° 14,43' S	177° 8,44' E	965	N 9	242.5	1.2	Multi Corer	MUC	an Deck	
SO226/072-1	20/02/13	12:45	44° 14,42' S	177° 8,43' E	963	N 9	0.5	0.9	Multi Corer	MUC	Ende Station	
SO226/073-1	20/02/13	12:46	44° 14,41' S	177° 8,43' E	962	NNE 9	51.5	1.9	Multi Corer	MUC	Beginn Station	
SO226/073-1	20/02/13	12:57	44° 14,39' S	177° 8,42' E	964	N 9	323.7	0.7	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/073-1	20/02/13	13:22	44° 14,38' S	177° 8,42' E	965	N 9	290.9	0.8	Multi Corer	MUC	Bodenkontakt	SLmax: 963 m
SO226/073-1	20/02/13	13:51	44° 14,39' S	177° 8,43' E	964	N 8	273.6	1.1	Multi Corer	MUC	an Deck	
SO226/073-1	20/02/13	13:52	44° 14,39' S	177° 8,43' E	963	N 8	227.9	2	Multi Corer	MUC	Ende Station	
SO226/073-2	20/02/13	13:53	44° 14,39' S	177° 8,43' E	964	N 7	213.1	1.8	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/073-2	20/02/13	14:40	44° 14,39' S	177° 8,43' E	961	N 8	119.3	0.8	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/073-2	20/02/13	15:03	44° 14,37' S	177° 8,42' E	963	N 8	19.4	1.7	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 946 m; SZmax: 50 kN
SO226/073-2	20/02/13	15:43	44° 14,40' S	177° 8,44' E	960	N 8	31.4	0.2	Piston Corer 9 meter	PC 9M	an Deck	
SO226/073-2	20/02/13	15:43	44° 14,40' S	177° 8,44' E	960	N 8	31.4	0.2	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/074-1	20/02/13	16:37	44° 14,37' S	177° 8,54' E	956	N 8	67	1.3	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/074-1	20/02/13	16:37	44° 14,37' S	177° 8,54' E	956	N 8	67	1.3	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/074-1	20/02/13	17:02	44° 14,37' S	177° 8,53' E	957	N 8	65.8	1.2	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 945 m; SZmax: 48 kN
SO226/074-1	20/02/13	17:41	44° 14,38' S	177° 8,55' E	958	N 7	39.7	0.7	Piston Corer 9 meter	PC 9M	an Deck	
SO226/074-1	20/02/13	17:41	44° 14,38' S	177° 8,55' E	958	N 7	39.7	0.7	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/075-1	20/02/13	19:02	44° 14,38' S	177° 9,02' E	963	N 6	89.5	1	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/075-1	20/02/13	19:14	44° 14,38' S	177° 9,01' E	964	N 7	271	0.8	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/075-1	20/02/13	19:39	44° 14,37' S	177° 9,05' E	963	N 6	32.3	1.2	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 948 m; SZmax: 39 kN
SO226/075-1	20/02/13	20:14	44° 14,34' S	177° 9,04' E	964	N 6	62.7	0.9	Piston Corer 9 meter	PC 9M	an Deck	
SO226/075-1	20/02/13	20:20	44° 14,30' S	177° 9,07' E	963	N 5	131	0.6	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/075-2	20/02/13	20:59	44° 14,37' S	177° 9,02' E	965	N 6	240	0.4	Piston Corer 9 meter	PC 9M	Beginn Station	

SO226/075-2	20/02/13	21:10	44° 14,35' S	177° 9,04' E	965	NNW 7	24.5	0.6	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/075-2	20/02/13	21:33	44° 14,38' S	177° 8,94' E	967	NNW 8	297.4	0.3	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 951 m; SZmax: 37 kN
SO226/075-2	20/02/13	22:09	44° 14,24' S	177° 8,97' E	966	NNW 6	33.3	0.9	Piston Corer 9 meter	PC 9M	an Deck	
SO226/075-2	20/02/13	22:09	44° 14,24' S	177° 8,97' E	966	NNW 6	33.3	0.9	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/076-1	20/02/13	23:27	44° 14,38' S	177° 10,35' E	968	WNW 4	221.3	0.3	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/076-1	20/02/13	23:39	44° 14,40' S	177° 10,38' E	966	WNW 6	180.1	0.2	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/076-1	21/02/13	0:05	44° 14,37' S	177° 10,37' E	966	NW 4	230.3	0.6	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 951 m; SZmax: 45 kN
SO226/076-1	21/02/13	0:46	44° 14,41' S	177° 10,45' E	964	W 4	245	0.7	Piston Corer 9 meter	PC 9M	an Deck	
SO226/076-1	21/02/13	0:47	44° 14,42' S	177° 10,46' E	965	WNW 4	19.4	0.6	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/076-2	21/02/13	0:48	44° 14,42' S	177° 10,46' E	964	WNW 4	280.8	0.6	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/076-2	21/02/13	1:39	44° 14,33' S	177° 10,37' E	965	SW 4	263.2	0.7	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/076-2	21/02/13	2:03	44° 14,38' S	177° 10,40' E	967	SW 7	203.1	0.3	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 950 m; SZmax: 42 kN
SO226/076-2	21/02/13	2:44	44° 14,38' S	177° 10,46' E	964	SW 7	178.9	0.1	Piston Corer 9 meter	PC 9M	an Deck	
SO226/076-2	21/02/13	2:45	44° 14,38' S	177° 10,46' E	964	SW 7	98.8	1	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/077-1	21/02/13	3:42	44° 14,37' S	177° 11,18' E	936	SSW 7	24.9	0.2	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/077-1	21/02/13	3:42	44° 14,37' S	177° 11,18' E	936	SSW 7	24.9	0.2	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/077-1	21/02/13	4:07	44° 14,37' S	177° 11,13' E	936	SSW 6	330.8	0.2	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 921 m; SZmax: 40 kN
SO226/077-1	21/02/13	4:44	44° 14,37' S	177° 11,13' E	934	SSW 6	200.5	0.7	Piston Corer 9 meter	PC 9M	an Deck	
SO226/077-1	21/02/13	4:44	44° 14,37' S	177° 11,13' E	934	SSW 6	200.5	0.7	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/077-2	21/02/13	5:50	44° 14,36' S	177° 11,14' E	935	SSW 5	238.1	0.9	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/077-2	21/02/13	5:50	44° 14,36' S	177° 11,14' E	935	SSW 5	238.1	0.9	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/077-2	21/02/13	6:15	44° 14,37' S	177° 11,14' E	936	SSW 5	206.1	0.7	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 921 m; SZmax: 49 kN
SO226/077-2	21/02/13	6:52	44° 14,37' S	177° 11,14' E	935	SSW 5	303.3	0.4	Piston Corer 9 meter	PC 9M	an Deck	
SO226/077-2	21/02/13	6:52	44° 14,37' S	177° 11,14' E	935	SSW 5	303.3	0.4	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/077-3	21/02/13	7:19	44° 14,36' S	177° 11,14' E	934	SSW 5	249.8	0.3	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/077-3	21/02/13	7:32	44° 14,37' S	177° 11,14' E	937	SSW 5	173.1	0.2	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/077-3	21/02/13	7:56	44° 14,39' S	177° 11,16' E	936	SW 5	287.4	0.4	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 920 m; SZmax: 38 kN
SO226/077-3	21/02/13	8:33	44° 14,38' S	177° 11,14' E	935	SW 5	296.4	0.5	Piston Corer 9 meter	PC 9M	an Deck	
SO226/077-3	21/02/13	8:33	44° 14,38' S	177° 11,14' E	935	SW 5	296.4	0.5	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/077-4	21/02/13	8:56	44° 14,37' S	177° 11,14' E	935	SW 4	24.9	0.5	Multi Corer	MUC	Beginn Station	
SO226/077-4	21/02/13	9:01	44° 14,38' S	177° 11,16' E	936	SW 5	162.7	0.3	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/077-4	21/02/13	9:24	44° 14,38' S	177° 11,15' E	935	SW 5	319	0.2	Multi Corer	MUC	Bodenkontakt	SLmax: 940 m; SZmax: 23 kN
SO226/077-4	21/02/13	9:49	44° 14,42' S	177° 11,19' E	936	SW 6	178.3	0.9	Multi Corer	MUC	an Deck	
SO226/077-4	21/02/13	9:59	44° 14,36' S	177° 11,14' E	934	SSW 7	310.4	0.5	Multi Corer	MUC	Ende Station	
SO226/077-5	21/02/13	10:04	44° 14,34' S	177° 11,12' E	934	SW 7	321.1	0.7	Multi Corer	MUC	Beginn Station	
SO226/077-5	21/02/13	10:06	44° 14,33' S	177° 11,12' E	935	SW 7	90.9	1	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/077-5	21/02/13	10:29	44° 14,37' S	177° 11,15' E	935	WSW 7	312	0.5	Multi Corer	MUC	Bodenkontakt	SLmax: 938 m; SZmax: 20 kN
SO226/077-5	21/02/13	10:53	44° 14,34' S	177° 11,14' E	933	SW 6	244.8	0.4	Multi Corer	MUC	an Deck	
SO226/077-5	21/02/13	10:53	44° 14,34' S	177° 11,14' E	933	SW 6	244.8	0.4	Multi Corer	MUC	Ende Station	
SO226/078-1	21/02/13	11:24	44° 14,36' S	177° 8,47' E	962	SW 9	198.8	1	Multi Corer	MUC	Beginn Station	
SO226/078-1	21/02/13	11:28	44° 14,36' S	177° 8,45' E	962	WSW 8	82.3	0.2	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/078-1	21/02/13	11:50	44° 14,38' S	177° 8,41' E	962	WSW 8	6.3	0.1	Multi Corer	MUC	Bodenkontakt	SLmax: 963 m
SO226/078-1	21/02/13	12:16	44° 14,38' S	177° 8,42' E	962	SW 7	107.7	0.4	Multi Corer	MUC	an Deck	
SO226/078-1	21/02/13	12:17	44° 14,38' S	177° 8,42' E	962	SW 7	309	0.5	Multi Corer	MUC	Ende Station	
SO226/078-2	21/02/13	12:18	44° 14,38' S	177° 8,42' E	962	SW 7	185.3	0.5	Multi Corer	MUC	Beginn Station	
SO226/078-2	21/02/13	12:23	44° 14,37' S	177° 8,42' E	962	SW 5	331.4	0.1	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/078-2	21/02/13	12:46	44° 14,39' S	177° 8,40' E	962	SW 7	201.6	0.1	Multi Corer	MUC	Bodenkontakt	SLmax: 967 m
SO226/078-2	21/02/13	13:12	44° 14,39' S	177° 8,41' E	961	SW 8	316.6	0.4	Multi Corer	MUC	an Deck	
SO226/078-2	21/02/13	13:17	44° 14,38' S	177° 8,41' E	962	SW 8	307.4	0.3	Multi Corer	MUC	Ende Station	
SO226/079-1	21/02/13	13:56	44° 17,53' S	177° 3,45' E	973	SW 10	78.5	0.5	Multi Corer	MUC	Beginn Station	
SO226/079-1	21/02/13	14:03	44° 17,54' S	177° 3,41' E	972	SW 9	318.6	0.2	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/079-1	21/02/13	14:26	44° 17,55' S	177° 3,41' E	972	SSW 8	245.4	0.5	Multi Corer	MUC	Bodenkontakt	SLmax: 978 m
SO226/079-1	21/02/13	14:56	44° 17,55' S	177° 3,41' E	971	SSW 8	274	0.5	Multi Corer	MUC	an Deck	
SO226/079-1	21/02/13	14:57	44° 17,56' S	177° 3,41' E	972	SSW 8	216.2	1	Multi Corer	MUC	Ende Station	
SO226/080-1	21/02/13	15:24	44° 18,25' S	177° 2,61' E	1020	SW 6	134.9	0.3	Multi Corer	MUC	Beginn Station	
SO226/080-1	21/02/13	15:24	44° 18,25' S	177° 2,61' E	1020	SW 6	134.9	0.3	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/080-1	21/02/13	15:51	44° 18,29' S	177° 2,58' E	1017	SW 8	52.8	0.5	Multi Corer	MUC	Bodenkontakt	SLmax: 1025 m; SZmax: 20 kN
SO226/080-1	21/02/13	16:19	44° 18,29' S	177° 2,58' E	1018	SW 8	213.2	0.4	Multi Corer	MUC	an Deck	
SO226/080-1	21/02/13	16:20	44° 18,29' S	177° 2,57' E	1017	SSW 8	246.6	0.3	Multi Corer	MUC	Ende Station	
SO226/080-2	21/02/13	16:20	44° 18,29' S	177° 2,57' E	1017	SSW 8	246.6	0.3	Multi Corer	MUC	Beginn Station	
SO226/080-2	21/02/13	16:21	44° 18,29' S	177° 2,56' E	1018	SSW 8	161.9	0.6	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/080-2	21/02/13	16:50	44° 18,28' S	177° 2,59' E	1017	SW 9	97.9	0.5	Multi Corer	MUC	Bodenkontakt	SLmax: 1020 m; SZmax: 24 kN
SO226/080-2	21/02/13	17:18	44° 18,33' S	177° 2,51' E	1017	SSW 8	224.7	0.6	Multi Corer	MUC	an Deck	
SO226/080-2	21/02/13	17:18	44° 18,33' S	177° 2,51' E	1017	SSW 8	224.7	0.6	Multi Corer	MUC	Ende Station	
SO226/081-1	21/02/13	17:19	44° 18,34' S	177° 2,50' E	1016	SSW 8	201.5	0.6	Multi Corer	MUC	Beginn Station	
SO226/081-1	21/02/13	17:19	44° 18,34' S	177° 2,50' E	1016	SSW 8	201.5	0.6	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/081-1	21/02/13	17:50	44° 18,37' S	177° 2,48' E	1019	SSW 9	146.6	0.1	Multi Corer	MUC	Bodenkontakt	SLmax: 1018 m; SZmax: 23 kN
SO226/081-1	21/02/13	18:18	44° 18,45' S	177° 2,39' E	1020	S 8	170.9	0.6	Multi Corer	MUC	an Deck	
SO226/081-1	21/02/13	18:18	44° 18,45' S	177° 2,39' E	1020	S 8	170.9	0.6	Multi Corer	MUC	Ende Station	
SO226/082-1	21/02/13	18:19	44° 18,45' S	177° 2,38' E	1018	S 9	166.8	0.3	Multi Corer	MUC	Beginn Station	
SO226/082-1	21/02/13	18:20	44° 18,45' S	177° 2,38' E	1021	S 9	75	0.8	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/082-1	21/02/13	18:51	44° 18,49' S	177° 2,38' E	1021	SSW 8	126.2	0.4	Multi Corer	MUC	Bodenkontakt	SLmax: 1026 m; SZmax: 21 kN
SO226/082-1	21/02/13	19:16	44° 18,44' S	177° 2,35' E	1020	SSW 8	234.4	0.6	Multi Corer	MUC	an Deck	
SO226/082-1	21/02/13	19:16	44° 18,44' S	177° 2,35' E	1020	SSW 8	234.4	0.6	Multi Corer	MUC	Ende Station	
SO226/082-2	21/02/13	19:18	44° 18,44' S	177° 2,35' E	1020	S 9	184.4	0.8	Multi Corer	MUC	Beginn Station	

SO226/082-2	21/02/13	19:20	44° 18,45' S	177° 2,34' E	1018	S 9	247.1	0.8	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/082-2	21/02/13	19:45	44° 18,48' S	177° 2,37' E	1022	S 7	340.9	0.9	Multi Corer	MUC	Bodenkontakt	SLmax: 1027m; SZmax: 22 kN
SO226/082-2	21/02/13	20:10	44° 18,45' S	177° 2,41' E	1026	S 11	222.3	1.1	Multi Corer	MUC	an Deck	
SO226/082-2	21/02/13	20:10	44° 18,45' S	177° 2,41' E	1026	S 11	222.3	1.1	Multi Corer	MUC	Ende Station	
SO226/082-3	21/02/13	20:30	44° 18,49' S	177° 2,37' E	1022	S 10	173.5	0.1	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/082-3	21/02/13	20:42	44° 18,44' S	177° 2,31' E	1016	S 8	127.1	0.9	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/082-3	21/02/13	21:06	44° 18,49' S	177° 2,37' E	1019	S 9	190.8	0.3	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 1004 m; SZmax: 40 kN
SO226/082-3	21/02/13	21:43	44° 18,61' S	177° 2,65' E	1012	SSW 7	135.6	0.3	Piston Corer 9 meter	PC 9M	an Deck	
SO226/082-3	21/02/13	21:43	44° 18,61' S	177° 2,65' E	1012	SSW 7	135.6	0.3	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/083-1	21/02/13	22:16	44° 18,38' S	177° 2,49' E	1010	SSE 7	191.5	0.4	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/083-1	21/02/13	22:28	44° 18,37' S	177° 2,51' E	1014	S 7	89.8	0.1	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/083-1	21/02/13	22:51	44° 18,36' S	177° 2,51' E	1018	SSW 7	312.1	1.1	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 1002 m; SZmax: 49 kN
SO226/083-1	21/02/13	23:26	44° 18,27' S	177° 2,55' E	1016	S 8	233.2	0.6	Piston Corer 9 meter	PC 9M	an Deck	
SO226/083-1	21/02/13	23:27	44° 18,27' S	177° 2,55' E	1017	S 8	17.5	1.3	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/084-1	21/02/13	23:28	44° 18,27' S	177° 2,55' E	1017	S 9	176.9	0.8	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/084-1	22/02/13	0:30	44° 18,26' S	177° 2,59' E	1015	S 10	38.7	0.2	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/084-1	22/02/13	0:54	44° 18,28' S	177° 2,59' E	1016	SSW 12	48.3	0.7	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 1002m; SZmax: 49 kN
SO226/084-1	22/02/13	1:27	44° 18,28' S	177° 2,59' E	1018	S 11	357.3	1.2	Piston Corer 9 meter	PC 9M	an Deck	
SO226/084-1	22/02/13	2:00	44° 18,25' S	177° 2,59' E	1015	S 11	170.7	1.9	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/085-1	22/02/13	2:27	44° 17,55' S	177° 3,49' E	984	SSW 11	286.3	0.9	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/085-1	22/02/13	2:39	44° 17,54' S	177° 3,42' E	973	S 10	232.8	0.6	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/085-1	22/02/13	3:00	44° 17,56' S	177° 3,42' E	973	SSW 11	103.7	0.9	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 958 m; SZmax: 30 kN
SO226/085-1	22/02/13	3:38	44° 17,54' S	177° 3,42' E	972	S 9	32	1.1	Piston Corer 9 meter	PC 9M	an Deck	
SO226/085-1	22/02/13	3:38	44° 17,54' S	177° 3,42' E	972	S 9	32	1.1	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/085-2	22/02/13	5:19	44° 17,54' S	177° 3,44' E	974	S 9	36.7	0.8	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/085-2	22/02/13	5:19	44° 17,54' S	177° 3,44' E	974	S 9	36.7	0.8	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/085-2	22/02/13	5:42	44° 17,56' S	177° 3,42' E	973	S 8	21.5	0.8	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 957 m; SZmax: 41 kN
SO226/085-2	22/02/13	6:21	44° 17,55' S	177° 3,41' E	971	S 8	20	1	Piston Corer 9 meter	PC 9M	an Deck	
SO226/085-2	22/02/13	6:21	44° 17,55' S	177° 3,41' E	971	S 8	20	1	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/086-1	22/02/13	7:51	44° 23,59' S	176° 54,65' E	1149	S 9	308.9	8.2	Vermessung	EM / PS	Beginn Profil	rwK: 329°; d: 6 nm
SO226/086-1	22/02/13	8:38	44° 18,19' S	176° 50,12' E	905	S 9	340.1	8.1	Vermessung	EM / PS	Kursänderung	rwK: 061°; d: 17 nm
SO226/086-1	22/02/13	10:50	44° 10,09' S	177° 10,34' E	823	S 7	67.1	7.5	Vermessung	EM / PS	Kursänderung	rwK: 106°; d: 3 nm
SO226/086-1	22/02/13	11:11	44° 10,70' S	177° 14,02' E	861	S 7	111.4	7.7	Vermessung	EM / PS	Kursänderung	rwK: 078°; d: 11 nm
SO226/086-1	22/02/13	12:37	44° 8,37' S	177° 29,64' E	917	SW 5	106.2	5.9	Vermessung	EM / PS	Kursänderung	rwK: 133°; d: 2 nm
SO226/086-1	22/02/13	12:55	44° 9,85' S	177° 31,98' E	947	SSW 7	102.6	6.7	Vermessung	EM / PS	Kursänderung	rwK: 080°; d: 5 nm
SO226/086-1	22/02/13	13:34	44° 8,95' S	177° 39,01' E	952	SSW 7	91.6	7.1	Vermessung	EM / PS	Kursänderung	rwK: 001°; d: 7 nm
SO226/086-1	22/02/13	14:34	44° 1,91' S	177° 38,92' E	792	SSW 6	8.4	7.9	Vermessung	EM / PS	Kursänderung	rwK: 277°; d: 11 nm
SO226/086-1	22/02/13	16:03	44° 0,71' S	177° 23,85' E	731	SW 8	287	8.8	Vermessung	EM / PS	Kursänderung	rwK: 096°; d: 11 nm
SO226/086-1	22/02/13	17:30	44° 3,19' S	177° 37,06' E	814	SW 9	141.7	6	Vermessung	EM / PS	Kursänderung	rwK: 185°; d: 4 nm
SO226/086-1	22/02/13	18:03	44° 7,50' S	177° 36,52' E	906	SW 9	194.3	7.6	Vermessung	EM / PS	Kursänderung	rwK: 259°; d: 3 nm
SO226/086-1	22/02/13	18:28	44° 8,03' S	177° 32,54' E	965	SW 9	279.9	6.9	Vermessung	EM / PS	Kursänderung	rwK: 313°; d: 2 nm
SO226/086-1	22/02/13	18:46	44° 6,43' S	177° 30,14' E	886	SSW 11	286.1	6.6	Vermessung	EM / PS	Kursänderung	rwK: 258°; d: 12 nm
SO226/086-1	22/02/13	20:16	44° 8,88' S	177° 14,35' E	820	SW 8	257	7.5	Vermessung	EM / PS	Kursänderung	rwK: 286°; d: 3 nm
SO226/086-1	22/02/13	20:36	44° 8,26' S	177° 10,71' E	787	SSW 11	284	8	Vermessung	EM / PS	Kursänderung	rwK: 241°; d: 18 nm
SO226/086-1	22/02/13	22:52	44° 16,68' S	176° 48,74' E	862	SW 11	240.4	8.8	Vermessung	EM / PS	Ende Profil	
SO226/087-1	23/02/13	0:12	44° 17,52' S	177° 3,45' E	971	SW 10	243.4	0.6	Ocean Floor Observation System	OFOS	Beginn Station	
SO226/087-1	23/02/13	0:15	44° 17,53' S	177° 3,46' E	972	WSW 10	287.3	0.2	Ocean Floor Observation System	OFOS	zu Wasser	W 2
SO226/087-1	23/02/13	0:46	44° 17,54' S	177° 3,41' E	971	WSW 8	45	0.5	Ocean Floor Observation System	OFOS	Bodensicht	SL: 963 m; rwK: 219°
SO226/087-1	23/02/13	4:04	44° 18,48' S	177° 2,35' E	1022	SW 10	209.9	1.3	Ocean Floor Observation System	OFOS	Beginn hieven	SLmax: 1024 m; d: 1 nm
SO226/087-1	23/02/13	4:36	44° 18,40' S	177° 2,18' E	1030	SW 8	284.5	0.5	Ocean Floor Observation System	OFOS	an Deck	
SO226/087-1	23/02/13	4:36	44° 18,40' S	177° 2,18' E	1030	SW 8	284.5	0.5	Ocean Floor Observation System	OFOS	Ende Station	
SO226/088-1	23/02/13	4:54	44° 18,10' S	177° 2,95' E	993	S 10	15.7	6.2	Vermessung	EM / PS	Beginn Profil	rwK: 008°; d: 7 nm
SO226/088-1	23/02/13	5:49	44° 10,87' S	177° 4,32' E	804	SW 11	2	7.4	Vermessung	EM / PS	Kursänderung	rwK: 161°; d: 3 nm
SO226/088-1	23/02/13	6:16	44° 12,95' S	177° 5,34' E	873	SW 13	155.2	6.6	Vermessung	EM / PS	Kursänderung	rwK: 343°; d: 5 nm
SO226/088-1	23/02/13	6:55	44° 8,62' S	177° 4,32' E	752	SSW 11	328	8	Vermessung	EM / PS	Kursänderung	rwK: 063°; d: 5 nm
SO226/088-1	23/02/13	7:30	44° 6,52' S	177° 9,96' E	744	SW 9	64.6	8.1	Vermessung	EM / PS	Kursänderung	rwK: 102°; d: 3 nm
SO226/088-1	23/02/13	7:54	44° 7,01' S	177° 14,04' E	797	SW 7	91.5	8.3	Vermessung	EM / PS	Kursänderung	rwK: 077°; d: 12 nm
SO226/088-1	23/02/13	9:27	44° 4,26' S	177° 30,92' E	834	SW 10	81.2	8	Vermessung	EM / PS	Kursänderung	rwK: 095°; d: 3 nm
SO226/088-1	23/02/13	9:47	44° 4,41' S	177° 34,56' E	860	SW 8	96.5	8.2	Vermessung	EM / PS	Kursänderung	rwK: 310°; d: 5 nm
SO226/088-1	23/02/13	10:50	44° 4,82' S	177° 31,28' E	881	SSW 13	299.8	8.7	Vermessung	EM / PS	Kursänderung	rwK: 284°; d: 4 nm
SO226/088-1	23/02/13	11:21	44° 3,81' S	177° 25,93' E	929	SW 9	266.7	8.3	Vermessung	EM / PS	Kursänderung	rwK: 261°; d: 8 nm
SO226/088-1	23/02/13	12:24	44° 5,16' S	177° 14,47' E	753	WSW 9	270.1	8.7	Vermessung	EM / PS	Kursänderung	rwK: 284°; d: 3 nm
SO226/088-1	23/02/13	12:49	44° 4,38' S	177° 9,96' E	704	WSW 10	305.3	7.1	Vermessung	EM / PS	Kursänderung	rwK: 010°; d: 2 nm
SO226/088-1	23/02/13	13:03	44° 2,67' S	177° 10,30' E	679	SW 12	47.9	6.7	Vermessung	EM / PS	Kursänderung	rwK: 104°; d: 3 nm
SO226/088-1	23/02/13	13:27	44° 3,33' S	177° 14,48' E	718	SW 8	103.9	8.2	Vermessung	EM / PS	Kursänderung	rwK: 080°; d: 7 nm
SO226/088-1	23/02/13	14:16	44° 2,15' S	177° 23,42' E	763	SW 10	55.3	6.5	Vermessung	EM / PS	Kursänderung	rwK: 352°; d: 1 nm
SO226/088-1	23/02/13	14:28	44° 0,84' S	177° 23,21' E	730	S 9	294.1	4.7	Vermessung	EM / PS	Kursänderung	rwK: 261°; d: 7 nm
SO226/088-1	23/02/13	15:17	44° 1,78' S	177° 14,33' E	691	SW 10	271.7	7.4	Vermessung	EM / PS	Kursänderung	rwK: 081°; d: 8 nm
SO226/088-1	23/02/13	16:20	43° 59,24' S	177° 23,55' E	695	SW 10	40.2	7.3	Vermessung	EM / PS	Kursänderung	rwK: 097°; d: 12 nm
SO226/088-1	23/02/13	17:53	43° 59,61' S	177° 39,43' E	758	SW 12	71.8	6.3	Vermessung	EM / PS	Kursänderung	rwK: 277°; d: 13 nm
SO226/088-1	23/02/13	19:31	43° 57,33' S	177° 23,90' E	662	SW 10	271.1	8.1	Vermessung	EM / PS	Kursänderung	rwK: 097°; d: 13 nm
SO226/088-1	23/02/13	21:00	43° 59,08' S	177° 39,54' E	945	SW 12	99.7	8.1	Vermessung	EM / PS	Kursänderung	rwK: 277°; d: 14 nm
SO226/088-1	23/02/13	22:36	43° 56,08' S	177° 26,40' E	649	SW 10	288.9	8	Vermessung	EM / PS	Kursänderung	rwK: 097°; d: 13 nm
SO226/088-1	24/02/13	0:10	43° 55,95' S	177° 41,90' E	709	SW 14	61.9	7.2	Vermessung	EM / PS	Kursänderung	rwK: 045°; d: 2 nm
SO226/088-1	24/02/13	0:24	43° 54,64' S	177° 43,69' E	678	SSW 9	357.9	7.1	Vermessung	EM / PS	Kursänderung	rwK: 276°; d: 11 nm

SO226/088-1	24/02/13	1:47	43° 53,44' S	177° 28,94' E	612	SSW 12	273.2	8	Vermessung	EM / PS	Kursänderung	rwK: 037°; d: 2 nm
SO226/088-1	24/02/13	2:01	43° 52,07' S	177° 30,14' E	592	SSW 9	61.4	7.5	Vermessung	EM / PS	Kursänderung	rwK: 097°; d: 10 nm
SO226/088-1	24/02/13	3:20	43° 53,28' S	177° 44,64' E	638	SSW 10	69.4	8.2	Vermessung	EM / PS	Kursänderung	rwK: 276°; d: 12 nm
SO226/088-1	24/02/13	4:51	43° 50,89' S	177° 31,90' E	578	SSW 12	330.6	6.3	Vermessung	EM / PS	Kursänderung	rwK: 056°; d: 4 nm
SO226/088-1	24/02/13	5:24	43° 48,42' S	177° 36,80' E	566	SW 11	26.4	7.6	Vermessung	EM / PS	Kursänderung	rwK: 341°; d: 8 nm
SO226/088-1	24/02/13	6:25	43° 40,79' S	177° 33,25' E	361	SSW 12	334.7	8.7	Vermessung	EM / PS	Ende Profil	
SO226/089-1	24/02/13	21:18	43° 55,81' S	174° 42,21' E	501	NE 1	227.2	0.6	Side Scan	SSC	Beginn Station	
SO226/089-1	24/02/13	21:32	43° 55,83' S	174° 42,04' E	500	NE 0	221.8	0.8	Side Scan	SSC	Side Scan z.W.	
SO226/089-1	24/02/13	21:44	43° 55,93' S	174° 41,81' E	501	NE 1	173.3	0.5	Side Scan	SSC	Gewicht z.W.	
SO226/089-1	24/02/13	22:42	43° 57,00' S	174° 38,61' E	515	ENE 1	224.9	2.1	Side Scan	SSC	Beginn Profil	rwK: 242°; d: 13 nm; SLmax: 100
SO226/089-1	25/02/13	2:54	44° 2,98' S	174° 22,81' E	573	ENE 2	246.9	2.3	Side Scan	SSC	Kursänderung	rwK: 062°; d: 14 nm
SO226/089-1	25/02/13	7:44	43° 56,20' S	174° 38,56' E	518	NE 5	66	2.9	Side Scan	SSC	Ende Profil	
SO226/089-1	25/02/13	8:24	43° 55,72' S	174° 38,81' E	521	NE 2	232.1	2	Side Scan	SSC	Gewicht a.D.	
SO226/089-1	25/02/13	8:31	43° 55,75' S	174° 38,57' E	517	NE 6	238.8	1.6	Side Scan	SSC	Side Scan a. D.	
SO226/089-1	25/02/13	8:43	43° 55,95' S	174° 38,10' E	518	NE 2	254.7	1.6	Side Scan	SSC	Ende Station	
SO226/090-1	25/02/13	9:50	43° 59,44' S	174° 28,09' E	566	NNE 6	130.1	0.8	Multi Corer	MUC	Beginn Station	
SO226/090-1	25/02/13	9:52	43° 59,44' S	174° 28,10' E	573	N 5	52.5	0.1	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/090-1	25/02/13	10:08	43° 59,42' S	174° 28,08' E	573	NNE 6	250.6	0.1	Multi Corer	MUC	Bodenkontakt	SLmax: 570 m; SZmax: 20 kN
SO226/090-1	25/02/13	10:28	43° 59,38' S	174° 28,06' E	567	NNE 7	348.7	0	Multi Corer	MUC	an Deck	
SO226/090-1	25/02/13	10:28	43° 59,38' S	174° 28,06' E	567	NNE 7	348.7	0	Multi Corer	MUC	Ende Station	
SO226/091-1	25/02/13	10:37	43° 59,26' S	174° 27,97' E	573	NE 8	197.5	0.1	Multi Corer	MUC	Beginn Station	
SO226/091-1	25/02/13	10:40	43° 59,26' S	174° 27,97' E	570	NE 6	94.7	1.3	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/091-1	25/02/13	10:56	43° 59,25' S	174° 27,96' E	572	NNE 7	121.5	0.4	Multi Corer	MUC	Bodenkontakt	SLmax: 572 m; SZmax: 19 kN
SO226/091-1	25/02/13	11:14	43° 59,28' S	174° 27,95' E	571	NNE 7	165.8	0.5	Multi Corer	MUC	an Deck	
SO226/091-1	25/02/13	11:15	43° 59,29' S	174° 27,94' E	567	NNE 7	268.3	1.1	Multi Corer	MUC	Ende Station	
SO226/092-1	25/02/13	11:16	43° 59,29' S	174° 27,92' E	566	NNE 8	349.1	0.2	Multi Corer	MUC	Beginn Station	
SO226/092-1	25/02/13	11:43	43° 59,24' S	174° 27,92' E	573	NNE 7	231.3	0.7	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/092-1	25/02/13	12:00	43° 59,22' S	174° 27,92' E	574	NNE 6	237.6	0.3	Multi Corer	MUC	Bodenkontakt	SLmax: 575 m
SO226/092-1	25/02/13	12:17	43° 59,25' S	174° 27,88' E	575	NE 7	229.9	0.9	Multi Corer	MUC	an Deck	
SO226/092-1	25/02/13	12:18	43° 59,25' S	174° 27,87' E	574	NE 7	224.6	0.8	Multi Corer	MUC	Ende Station	
SO226/093-1	25/02/13	12:19	43° 59,25' S	174° 27,86' E	574	NE 8	278.9	0.4	Multi Corer	MUC	Beginn Station	
SO226/093-1	25/02/13	12:37	43° 59,16' S	174° 27,86' E	567	NE 7	231.1	0.7	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/093-1	25/02/13	12:52	43° 59,16' S	174° 27,87' E	573	NNE 6	324.4	0.2	Multi Corer	MUC	Bodenkontakt	SLmax: 573 m
SO226/093-1	25/02/13	13:10	43° 59,16' S	174° 27,85' E	575	NE 7	228.2	0.4	Multi Corer	MUC	an Deck	
SO226/093-1	25/02/13	13:11	43° 59,16' S	174° 27,85' E	568	NE 6	234.4	0.6	Multi Corer	MUC	Ende Station	
SO226/093-2	25/02/13	13:12	43° 59,16' S	174° 27,85' E	567	NE 6	343.4	0.1	Multi Corer	MUC	Beginn Station	
SO226/093-2	25/02/13	13:29	43° 59,16' S	174° 27,86' E	568	NE 7	185.3	0.2	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/093-2	25/02/13	13:45	43° 59,15' S	174° 27,86' E	567	NNE 7	322.9	0.5	Multi Corer	MUC	Bodenkontakt	SLmax: 578 m
SO226/093-2	25/02/13	14:04	43° 59,15' S	174° 27,86' E	568	NE 6	302.2	0.6	Multi Corer	MUC	an Deck	
SO226/093-2	25/02/13	14:05	43° 59,15' S	174° 27,86' E	567	NE 7	38.8	0.2	Multi Corer	MUC	Ende Station	
SO226/094-1	25/02/13	14:30	43° 59,43' S	174° 28,05' E	568	NE 6	340.6	0.7	Multi Corer	MUC	Beginn Station	
SO226/094-1	25/02/13	14:32	43° 59,42' S	174° 28,04' E	568	NE 7	324.1	0.4	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/094-1	25/02/13	14:47	43° 59,43' S	174° 28,08' E	568	NNE 7	226.4	0.5	Multi Corer	MUC	Bodenkontakt	SLmax: 575 m
SO226/094-1	25/02/13	15:09	43° 59,44' S	174° 28,07' E	568	NE 6	305.5	0.3	Multi Corer	MUC	an Deck	
SO226/094-1	25/02/13	15:10	43° 59,43' S	174° 28,07' E	569	NE 6	9.1	0.6	Multi Corer	MUC	Ende Station	
SO226/094-2	25/02/13	15:20	43° 59,44' S	174° 28,11' E	568	NNE 5	215.2	0.5	Multi Corer	MUC	Beginn Station	
SO226/094-2	25/02/13	15:20	43° 59,44' S	174° 28,11' E	568	NNE 5	215.2	0.5	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/094-2	25/02/13	15:37	43° 59,44' S	174° 28,05' E	569	NNE 7	4.3	0.1	Multi Corer	MUC	Bodenkontakt	SLmax: 572 m; SZmax: 20 kN
SO226/094-2	25/02/13	15:58	43° 59,44' S	174° 28,06' E	569	NE 6	277.1	0.3	Multi Corer	MUC	an Deck	
SO226/094-2	25/02/13	15:58	43° 59,44' S	174° 28,06' E	569	NE 6	277.1	0.3	Multi Corer	MUC	Ende Station	
SO226/094-3	25/02/13	15:59	43° 59,43' S	174° 28,06' E	575	NE 6	357.1	0.4	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/094-3	25/02/13	16:36	43° 59,42' S	174° 28,10' E	569	NNE 8	282.7	0.5	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/094-3	25/02/13	16:55	43° 59,42' S	174° 28,05' E	568	NNE 6	136.2	0.9	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 557 m; SZmax: 36 kN
SO226/094-3	25/02/13	17:27	43° 59,41' S	174° 28,05' E	569	NE 8	304.5	0.4	Piston Corer 9 meter	PC 9M	an Deck	
SO226/094-3	25/02/13	17:27	43° 59,41' S	174° 28,05' E	569	NE 8	304.5	0.4	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/094-4	25/02/13	17:28	43° 59,41' S	174° 28,04' E	568	NE 7	309	0.8	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/094-4	25/02/13	19:00	43° 59,43' S	174° 28,06' E	568	NE 9	350.7	0.5	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/094-4	25/02/13	19:16	43° 59,42' S	174° 28,04' E	568	NNE 8	193.6	0.6	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 557 m; SZmax: 31 kN
SO226/094-4	25/02/13	19:45	43° 59,45' S	174° 28,10' E	567	NNE 9	126.9	0.7	Piston Corer 9 meter	PC 9M	an Deck	
SO226/094-4	25/02/13	19:45	43° 59,45' S	174° 28,10' E	567	NNE 9	126.9	0.7	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/094-5	25/02/13	19:46	43° 59,46' S	174° 28,10' E	568	NNE 9	210.4	0.2	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/094-5	25/02/13	20:22	43° 59,45' S	174° 28,11' E	567	NNE 8	186.6	0.3	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/094-5	25/02/13	20:39	43° 59,42' S	174° 28,08' E	568	NNE 7	283.9	0.6	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 555 m; SZmax: 34 kN
SO226/094-5	25/02/13	21:09	43° 59,44' S	174° 28,05' E	568	NNE 5	29.6	1	Piston Corer 9 meter	PC 9M	an Deck	
SO226/094-5	25/02/13	21:09	43° 59,44' S	174° 28,05' E	568	NNE 5	29.6	1	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/095-1	25/02/13	21:35	43° 59,26' S	174° 27,93' E	568	NNE 8	108.6	0.5	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/095-1	25/02/13	21:49	43° 59,26' S	174° 27,93' E	567	NNE 7	15.1	0.2	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/095-1	25/02/13	22:05	43° 59,25' S	174° 27,93' E	568	NE 6	229.5	0.2	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 555 m; SZmax: 30 kN
SO226/095-1	25/02/13	22:33	43° 59,31' S	174° 27,88' E	567	NNE 4	97.2	0.1	Piston Corer 9 meter	PC 9M	an Deck	
SO226/095-1	25/02/13	22:33	43° 59,31' S	174° 27,88' E	567	NNE 4	97.2	0.1	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/096-1	25/02/13	23:36	43° 59,23' S	174° 27,91' E	572	NE 5	305.8	0.4	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/096-1	25/02/13	23:50	43° 59,23' S	174° 27,92' E	567	NNE 5	180.4	0.1	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/096-1	26/02/13	0:06	43° 59,22' S	174° 27,91' E	568	NNE 6	282	0.4	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 559 m; SZmax: 36 kN
SO226/096-1	26/02/13	0:33	43° 59,24' S	174° 27,89' E	574	NE 6	40.6	0.3	Piston Corer 9 meter	PC 9M	an Deck	
SO226/096-1	26/02/13	0:34	43° 59,24' S	174° 27,89' E	571	NE 6	178.2	0.1	Piston Corer 9 meter	PC 9M	Ende Station	

SO226/097-1	26/02/13	0:35	43° 59,25' S	174° 27,89' E	568	NNE 6	111.2	0.6	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/097-1	26/02/13	1:09	43° 59,18' S	174° 27,85' E	574	NNE 5	111.6	0.4	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/097-1	26/02/13	1:26	43° 59,16' S	174° 27,85' E	567	NE 5	178	0.3	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 556 m SZ: 32kN
SO226/097-1	26/02/13	1:55	43° 59,15' S	174° 27,84' E	567	NE 5	314.3	0.2	Piston Corer 9 meter	PC 9M	an Deck	
SO226/097-1	26/02/13	1:56	43° 59,15' S	174° 27,85' E	568	NE 5	83.1	0.7	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/098-1	26/02/13	2:40	44° 0,12' S	174° 28,62' E	574	NE 4	99.9	0.2	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/098-1	26/02/13	2:51	44° 0,11' S	174° 28,66' E	573	NE 4	19.1	0.4	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/098-1	26/02/13	3:08	44° 0,12' S	174° 28,63' E	573	NE 4	5.1	0.3	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 569 m; SZmax: 41 kN
SO226/098-1	26/02/13	3:41	44° 0,13' S	174° 28,68' E	574	NNE 5	244.4	0.4	Piston Corer 9 meter	PC 9M	an Deck	
SO226/098-1	26/02/13	3:41	44° 0,13' S	174° 28,68' E	574	NNE 5	244.4	0.4	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/098-2	26/02/13	3:42	44° 0,13' S	174° 28,68' E	574	NE 5	76.2	0.4	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/098-2	26/02/13	4:15	44° 0,13' S	174° 28,62' E	573	NE 4	45.7	1.1	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/098-2	26/02/13	4:32	44° 0,11' S	174° 28,64' E	574	NE 4	127.4	0.4	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 563 m; SZmax: 59 kN
SO226/098-2	26/02/13	5:01	44° 0,09' S	174° 28,63' E	567	NE 3	223.9	0.4	Piston Corer 9 meter	PC 9M	an Deck	
SO226/098-2	26/02/13	5:01	44° 0,09' S	174° 28,63' E	567	NE 3	223.9	0.4	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/099-1	26/02/13	6:13	43° 58,97' S	174° 27,70' E	575	NE 4	12.5	0.7	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/099-1	26/02/13	6:13	43° 58,97' S	174° 27,70' E	575	NE 4	12.5	0.7	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/099-1	26/02/13	6:31	43° 58,95' S	174° 27,69' E	575	NE 4	292.6	0.2	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 562 m; SZmax: 27 kN
SO226/099-1	26/02/13	7:00	43° 58,96' S	174° 27,67' E	575	NE 3	233.6	0.2	Piston Corer 9 meter	PC 9M	an Deck	
SO226/099-1	26/02/13	7:00	43° 58,96' S	174° 27,67' E	575	NE 3	233.6	0.2	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/100-1	26/02/13	7:40	43° 58,83' S	174° 27,60' E	568	NE 4	173.3	0.2	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/100-1	26/02/13	7:55	43° 58,84' S	174° 27,60' E	569	NE 4	110.8	0.6	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/100-1	26/02/13	8:12	43° 58,84' S	174° 27,59' E	571	NE 4	270	0.7	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 556 m; SZmax: 30 kN
SO226/100-1	26/02/13	8:50	43° 58,89' S	174° 27,52' E	572	NE 2	96.4	0.6	Piston Corer 9 meter	PC 9M	an Deck	
SO226/100-1	26/02/13	8:50	43° 58,89' S	174° 27,52' E	572	NE 2	96.4	0.6	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/101-1	26/02/13	9:32	44° 1,16' S	174° 27,00' E	573	ENE 4	112.5	0.5	Piston Corer 9 meter	PC 9M	Beginn Station	
SO226/101-1	26/02/13	9:47	44° 1,16' S	174° 27,05' E	571	NE 3	38.3	0.3	Piston Corer 9 meter	PC 9M	zu Wasser	W 6; Transponder SL: 50 m
SO226/101-1	26/02/13	10:05	44° 1,16' S	174° 27,05' E	572	NE 3	292.9	0.5	Piston Corer 9 meter	PC 9M	Bodenkontakt	SLmax: 559 m; SZmax: 25 kN
SO226/101-1	26/02/13	10:37	44° 1,21' S	174° 26,99' E	573	SSW 0	281	0.7	Piston Corer 9 meter	PC 9M	an Deck	
SO226/101-1	26/02/13	10:37	44° 1,21' S	174° 26,99' E	573	SSW 0	281	0.7	Piston Corer 9 meter	PC 9M	Ende Station	
SO226/101-2	26/02/13	14:18	44° 1,17' S	174° 27,05' E	573	NE 3	0.6	0.5	Multi Corer	MUC	Beginn Station	
SO226/101-2	26/02/13	14:20	44° 1,17' S	174° 27,05' E	573	NE 3	53	0.2	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/101-2	26/02/13	14:36	44° 1,17' S	174° 27,05' E	573	NE 3	124.3	0.3	Multi Corer	MUC	Bodenkontakt	SLmax: 577 m
SO226/101-2	26/02/13	14:59	44° 1,17' S	174° 27,06' E	573	NE 2	274.4	0.1	Multi Corer	MUC	an Deck	
SO226/101-2	26/02/13	15:00	44° 1,17' S	174° 27,06' E	573	NE 3	189.3	0.2	Multi Corer	MUC	Ende Station	
SO226/102-1	26/02/13	15:39	43° 58,83' S	174° 27,59' E	569	NE 3	60.3	0.3	Multi Corer	MUC	Beginn Station	
SO226/102-1	26/02/13	15:39	43° 58,83' S	174° 27,59' E	569	NE 3	60.3	0.3	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/102-1	26/02/13	15:57	43° 58,83' S	174° 27,58' E	569	NE 3	166.7	0.1	Multi Corer	MUC	Bodenkontakt	SLmax: 575 m; SZmax: 18 kN
SO226/102-1	26/02/13	16:17	43° 58,87' S	174° 27,61' E	570	NE 3	258.3	0.2	Multi Corer	MUC	an Deck	
SO226/102-1	26/02/13	16:17	43° 58,87' S	174° 27,61' E	570	NE 3	258.3	0.2	Multi Corer	MUC	Ende Station	
SO226/103-1	26/02/13	16:33	43° 58,94' S	174° 27,70' E	580	NE 3	156.2	0.3	Multi Corer	MUC	Beginn Station	
SO226/103-1	26/02/13	16:33	43° 58,94' S	174° 27,70' E	580	NE 3	156.2	0.3	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/103-1	26/02/13	16:50	43° 58,92' S	174° 27,67' E	570	SW 0	285.5	0.4	Multi Corer	MUC	Bodenkontakt	SLmax: 573 m; SZmax: 17 kN
SO226/103-1	26/02/13	17:10	43° 58,95' S	174° 27,69' E	575	NE 3	102.4	0.8	Multi Corer	MUC	an Deck	
SO226/103-1	26/02/13	17:10	43° 58,95' S	174° 27,69' E	575	NE 3	102.4	0.8	Multi Corer	MUC	Ende Station	
SO226/104-1	26/02/13	17:43	44° 0,12' S	174° 28,60' E	568	NE 3	189.3	0.1	Multi Corer	MUC	Beginn Station	
SO226/104-1	26/02/13	17:43	44° 0,12' S	174° 28,60' E	568	NE 3	189.3	0.1	Multi Corer	MUC	zu Wasser	W 6; Transponder SL: 50 m
SO226/104-1	26/02/13	18:00	44° 0,10' S	174° 28,64' E	568	E 0	285.8	0.6	Multi Corer	MUC	Bodenkontakt	SLmax: 572 m; SZmax: 19 kN
SO226/104-1	26/02/13	18:20	44° 0,11' S	174° 28,64' E	568	WSW 0	227.3	0.1	Multi Corer	MUC	an Deck	
SO226/104-1	26/02/13	18:20	44° 0,11' S	174° 28,68' E	568	WSW 0	227.3	0.1	Multi Corer	MUC	Ende Station	

Appendix 3: Sediment Porewater Data, each page represents a single core.

SO226/2-30-2-PC9

Core	Sample ID	Sample Depth (cmbsf)	Cl^- (mM)	SO_4^{2-} (mM)	DIC (mM)	CH_4 (ppm)
30-2-PC9	1	10	569.9	30.1	2.27	BLD
30-2-PC9	2	20	614.5	32.4	2.37	BLD
30-2-PC9	3	40	585.2	30.9	2.41	BLD
30-2-PC9	4	60	572.4	30.1	2.47	BLD
30-2-PC9	5	80	645.6	34.4	2.52	BLD
30-2-PC9	6	100	558.6	29.5	2.92	BLD
30-2-PC9	7	120	599.7	31.4	2.83	BLD
30-2-PC9	8	150	570.3	29.8	2.56	BLD
30-2-PC9	9	185	734.9	39.3	2.93	BLD
30-2-PC9	10	215	536.0	28.0	2.62	BLD
30-2-PC9	11	250	617.2	32.4	2.86	0.09
30-2-PC9	12	290	634.9	33.9	2.90	0.44
30-2-PC9	13	330	590.8	31.3	2.93	0.49
30-2-PC9	14	370	588.7	30.7	2.99	0.23
30-2-PC9	15	405	513.8	26.1	2.97	0.52
30-2-PC9	16	435	517.2	26.2	2.95	0.47
30-2-PC9	17	470	520.1	26.6	2.73	0.46
30-2-PC9	18	505	601.6	31.7	2.99	BLD
30-2-PC9	19	540	553.2	29.3	3.01	0.67

SO226/2-33-1-PC9

Core	Sample ID	Sample Depth (cmbsf)	Cl^- (mM)	SO_4^{2-} (mM)	DIC (mM)	CH_4 (ppm)
33-1-PC9	20	20	514.5	26.5	2.28	BLD
33-1-PC9	21	25	514.5	26.5	2.34	BLD
33-1-PC9	22	35	541.8	28.4	2.20	BLD
33-1-PC9	23	45	533.1	27.5	2.16	BLD
33-1-PC9	24	60	571.6	30.3	2.31	BLD
33-1-PC9	25	75	544.0	29.0	2.21	BLD
33-1-PC9	26	95	499.4	26.5	2.48	BLD
33-1-PC9	27	125	586.1	30.8	2.32	BLD
33-1-PC9	28	155	519.4	26.6	2.30	BLD
33-1-PC9	29	185	558.3	29.4	2.16	BLD
33-1-PC9	30	220	553.9	29.2	2.27	BLD
33-1-PC9	31	265	557.5	29.3	2.19	BLD

SO226/2-44-2-PC9

Core	Sample ID	Sample Depth (cmbsf)	Cl^- (mM)	SO_4^{2-} (mM)	DIC (mM)	CH_4 (ppm)
44-1-PC9	32	10	531.6	28.4	2.38	BLD
44-1-PC9	33	25	529.2	28.3	2.43	BLD
44-1-PC9	34	45	526.1	28.1	2.20	BLD
44-1-PC9	35	65	528.1	28.2	2.49	BLD
44-1-PC9	36	85	607.5	32.3	2.53	BLD
44-1-PC9	37	105	531.6	28.3	2.55	BLD
44-1-PC9	38	125	482.4	25.7	2.46	BLD
44-1-PC9	39	155	541.8	28.0	2.52	BLD
44-1-PC9	40	185	543.3	27.9	2.57	BLD
44-1-PC9	41	215	545.5	28.1	2.69	BLD
44-1-PC9	42	245	537.2	27.9	2.55	BLD
44-1-PC9	43	285	576.1	30.4	2.68	BLD
44-1-PC9	44	315	561.0	29.3	2.87	BLD
44-1-PC9	45	345	527.6	27.1	2.36	BLD
44-1-PC9	46	375	541.2	27.7	2.66	BLD
44-1-PC9	47	405	531.6	27.6	2.63	BLD
44-1-PC9	48	435	536.2	27.4	2.71	BLD
44-1-PC9	49	470	534.9	27.3	2.53	BLD
44-1-PC9	50	510	532.5	27.3	2.33	BLD
44-1-PC9	51	545	540.9	27.7	2.75	BLD
44-1-PC9	52	575	532.3	27.5	2.96	BLD

SO226/2-45-2-PC9

Core	Sample ID	Sample Depth (cmbsf)	Cl^- (mM)	SO_4^{2-} (mM)	DIC (mM)	CH_4 (ppm)
45-2-PC9	53	10	532.6	27.4	2.53	BLD
45-2-PC9	54	25	532.3	27.7	2.56	BLD
45-2-PC9	55	45	527.6	27.1	2.68	BLD
45-2-PC9	56	65	530.8	27.3	2.68	BLD
45-2-PC9	57	86	523.2	27.2	3.00	BLD
45-2-PC9	58	106	524.2	27.2	2.93	BLD
45-2-PC9	59	126	524.2	26.8	3.16	BLD
45-2-PC9	60	151	531.6	27.3	3.17	BLD
45-2-PC9	61	191	528.0	27.2	3.19	BLD
45-2-PC9	62	211	532.1	27.1	3.27	BLD
45-2-PC9	63	241	531.2	27.0	3.38	BLD
45-2-PC9	64	271	525.6	26.8	3.60	BLD
45-2-PC9	65	301	531.7	26.7	3.21	BLD
45-2-PC9	66	331	532.1	26.7	3.78	BLD
45-2-PC9	67	361	529.7	26.5	3.87	BLD
45-2-PC9	68	396	534.4	26.5	4.04	BLD
45-2-PC9	69	426	528.7	26.3	3.92	BLD
45-2-PC9	70	456	528.6	26.2	4.07	BLD
45-2-PC9	71	486	527.5	26.3	4.21	BLD
45-2-PC9	72	516	529.5	26.3	4.35	BLD
45-2-PC9	73	546	527.0	26.3	4.33	BLD
45-2-PC9	74	576	520.4	25.8	4.08	BLD
45-2-PC9	75	606	530.3	26.4	4.18	BLD
45-2-PC9	76	636	560.9	26.5	4.37	BLD
45-2-PC9	77	651	543.1	25.6		BLD

SO226/2-51-2-PC9

Core	Sample ID	Sample Depth (cmbsf)	Cl^- (mM)	SO_4^{2-} (mM)	DIC (mM)	CH_4 (ppm)
51-2-PC9	78	10	536.2	27.6	2.47	BLD
51-2-PC9	79	25	530.9	27.4	ND	BLD
51-2-PC9	80	35	527.5	27.1	2.54	BLD
51-2-PC9	81	45	538.3	27.7	2.54	BLD
51-2-PC9	82	58	530.1	27.4	2.48	BLD
51-2-PC9	83	68	532.2	27.5	2.57	BLD
51-2-PC9	84	78	517.7	26.8	2.56	BLD
51-2-PC9	85	98	ND	29.2	2.68	BLD
51-2-PC9	86	118	464.6	23.9	2.69	BLD
51-2-PC9	87	138	464.0	24.0	2.85	BLD
51-2-PC9	88	168	458.9	23.5	2.92	BLD
51-2-PC9	89	198	459.0	23.6	2.85	BLD
51-2-PC9	90	233	451.1	23.3	3.09	BLD
51-2-PC9	91	273	458.7	23.5	2.91	BLD
51-2-PC9	92	313	469.5	24.0	3.15	BLD
51-2-PC9	93	348	460.7	23.5	3.31	BLD
51-2-PC9	94	379	460.2	23.5	3.19	BLD
51-2-PC9	95	419	450.7	22.9	3.27	BLD
51-2-PC9	96	459	520.1	26.3	3.14	BLD
51-2-PC9	97	499	482.5	24.6	3.14	BLD
51-2-PC9	98	539	464.9	23.6	3.33	BLD
51-2-PC9	99	579	457.4	23.1	3.39	BLD
51-2-PC9	100	624	458.7	23.4	3.50	BLD

SO226/2-52-2-PC9

Core	Sample ID	Sample Depth (cmbsf)	Cl^- (mM)	SO_4^{2-} (mM)	DIC (mM)	CH_4 (ppm)
52-1-PC9	101	10	ND	28.8	2.67	0.16
52-1-PC9	102	25	528.5	27.4	3.16	0.19
52-1-PC9	103	35	522.0	26.7	2.55	0.23
52-1-PC9	104	52	533.0	27.4	2.60	0.31
52-1-PC9	105	62	523.8	26.8	2.62	0.41
52-1-PC9	106	72	526.0	27.1	2.47	0.31
52-1-PC9	107	87	525.1	26.8	2.62	0.40
52-1-PC9	108	107	534.5	27.2	2.98	0.46
52-1-PC9	109	127	529.5	27.2	3.03	0.49
52-1-PC9	110	147	528.6	26.8	2.90	0.65
52-1-PC9	111	167	512.9	26.4	3.31	0.67
52-1-PC9	112	192	536.2	27.2	3.40	0.69
52-1-PC9	113	222	538.7	27.0	3.54	0.79
52-1-PC9	114	257	519.2	26.3	3.95	BLD
52-1-PC9	115	297	525.3	25.9	3.75	0.72
52-1-PC9	116	337	517.1	25.7	3.97	0.87
52-1-PC9	117	372	530.7	26.4	3.99	BLD
52-1-PC9	118	412	542.5	26.6	4.24	1.16
52-1-PC9	119	452	535.7	26.2	4.13	1.16
52-1-PC9	120	492	535.6	26.2	4.26	1.12
52-1-PC9	121	532	513.4	25.2	4.34	BLD
52-1-PC9	122	572	527.7	25.8	4.19	1.05
52-1-PC9	123	622	533.7	26.2	4.44	1.15

SO226/2-53-1-PC9

Core	Sample ID	Sample Depth (cmbsf)	Cl^- (mM)	SO_4^{2-} (mM)	DIC (mM)	CH_4 (ppm)
53-1-PC9	124	25	537.9	27.6	2.75	BLD
53-1-PC9	125	35	531.6	27.3	2.32	BLD
53-1-PC9	126	45	534.6	27.2	2.78	0.33
53-1-PC9	127	55	534.1	27.1	2.77	0.39
53-1-PC9	128	65	532.0	27.4	2.78	0.39
53-1-PC9	129	75	532.5	27.3	2.95	0.37
53-1-PC9	130	100	530.2	27.2	2.83	0.47
53-1-PC9	131	120	528.0	27.2	2.97	0.58
53-1-PC9	132	140	527.8	27.2	2.91	0.61
53-1-PC9	133	160	529.8	27.2	3.03	0.56
53-1-PC9	134	180	530.3	27.0	2.99	0.56
53-1-PC9	135	200	531.5	27.1	3.23	0.71
53-1-PC9	136	220	533.7	27.2	3.25	0.77
53-1-PC9	137	240	530.5	27.0	3.37	0.72
53-1-PC9	138	265	528.7	26.7	3.39	0.73
53-1-PC9	139	305	527.4	26.5	3.40	0.80
53-1-PC9	140	341	522.4	26.2	3.72	0.87
53-1-PC9	141	371	523.1	26.2	3.66	0.97
53-1-PC9	142	401	527.9	26.4	3.57	0.98
53-1-PC9	143	431	530.9	26.5	3.55	1.07
53-1-PC9	144	461	530.4	26.6	3.81	1.06
53-1-PC9	145	491	528.7	26.5	3.92	1.09
53-1-PC9	146	521	532.1	26.5	3.83	0.91
53-1-PC9	147	551	532.3	26.5	3.60	0.92
53-1-PC9	148	591	526.4	26.3	3.70	1.06

SO226/2-54-1-PC9

Core	Sample ID	Sample Depth (cmbsf)	Cl^- (mM)	SO_4^{2-} (mM)	DIC (mM)	CH_4 (ppm)
54-1-PC9	149	5	525.3	27.0	2.19	0.23
54-1-PC9	150	25	527.3	26.7	2.68	0.29
54-1-PC9	151	35	530.4	27.0	2.83	0.32
54-1-PC9	152	45	527.0	26.8	2.76	0.34
54-1-PC9	153	55	529.3	26.9	3.04	0.55
54-1-PC9	154	76	523.5	26.8	3.01	0.52
54-1-PC9	155	106	526.4	26.8	3.08	0.52
54-1-PC9	156	116	530.5	26.7	3.25	0.55
54-1-PC9	157	136	525.2	26.4	3.37	0.63
54-1-PC9	158	156	528.0	26.7	3.48	0.73
54-1-PC9	159	181	524.5	26.5	ND	0.77
54-1-PC9	160	211	529.0	26.5	3.80	0.70
54-1-PC9	161	241	527.8	26.0	3.86	0.81
54-1-PC9	162	271	525.2	25.9	3.98	0.96
54-1-PC9	163	301	531.2	26.2	4.04	1.02
54-1-PC9	164	331	520.8	25.4	4.24	1.14
54-1-PC9	165	356	529.0	26.1	ND	1.15
54-1-PC9	166	386	528.9	25.8	4.21	0.97
54-1-PC9	167	416	532.0	26.0	4.29	1.01
54-1-PC9	168	446	529.2	25.8	4.62	0.96
54-1-PC9	169	476	531.6	26.1	4.26	1.02
54-1-PC9	170	506	525.9	25.6	4.52	1.10
54-1-PC9	171	536	530.3	25.8	4.85	1.12
54-1-PC9	172	566	534.1	25.9	4.75	1.23
54-1-PC9	173	596	526.6	25.4	4.67	1.25
54-1-PC9	174	621	535.8	25.9	4.74	1.38
54-1-PC9	175	646	533.3	25.8	5.29	1.27

SO226/2-73-2-PC9

Core	Sample ID	Sample Depth (cmbsf)	Cl^- (mM)	SO_4^{2-} (mM)	DIC (mM)	CH_4 (ppm)
73-2-PC9	176	15	525.9	27.1	2.26	0.40
73-2-PC9	177	25	519.9	26.4	1.74	0.25
73-2-PC9	178	35	530.2	26.9	2.45	0.49
73-2-PC9	179	48	493.2	25.0	2.60	0.37
73-2-PC9	180	58	517.3	26.6	2.83	0.53
73-2-PC9	181	68	522.8	26.3	2.76	0.55
73-2-PC9	182	88	530.1	26.3	2.89	0.65
73-2-PC9	183	108	517.9	25.9	3.03	0.68
73-2-PC9	184	128	522.4	25.9	3.33	BLD
73-2-PC9	185	158	527.3	25.9	3.64	0.81
73-2-PC9	186	188	523.2	25.6	3.53	0.73
73-2-PC9	187	218	535.5	25.7	4.09	0.78
73-2-PC9	188	248	528.5	25.5	3.96	0.81
73-2-PC9	189	283	537.9	25.3	4.27	0.81
73-2-PC9	190	323	528.1	24.8	4.39	0.93
73-2-PC9	191	368	529.7	24.8	4.37	0.93
73-2-PC9	192	413	530.3	24.6	4.33	0.92
73-2-PC9	193	463	522.6	24.0	4.79	0.99
73-2-PC9	194	513	531.6	24.5	4.80	1.00
73-2-PC9	195	563	527.8	24.0	4.73	1.03
73-2-PC9	196	613	528.5	23.8	5.19	1.08

SO226/2-74-1-PC9

Core	Sample ID	Sample Depth (cmbsf)	Cl^- (mM)	SO_4^{2-} (mM)	DIC (mM)	CH_4 (ppm)
74-1-PC9	197	17	540.1	27.6	2.39	0.34
74-1-PC9	198	27	523.3	26.8	2.42	0.12
74-1-PC9	199	37	521.5	26.7	2.87	0.64
74-1-PC9	200	47	531.7	26.8	2.35	0.45
74-1-PC9	201	57	529.4	26.8	1.30	0.46
74-1-PC9	202	72	529.7	26.8	1.60	0.41
74-1-PC9	203	87	532.3	27.0	2.97	0.19
74-1-PC9	204	107	521.4	26.5	2.93	0.63
74-1-PC9	205	132	528.0	26.5	3.31	0.55
74-1-PC9	206	152	521.2	26.4	3.34	0.62
74-1-PC9	207	172	524.7	26.4	3.12	0.68
74-1-PC9	208	192	524.7	26.2	3.32	0.67
74-1-PC9	209	217	489.7	24.5	3.30	0.70
74-1-PC9	210	247	514.4	25.7	3.24	0.70
74-1-PC9	211	277	522.1	26.1	5.24	0.37
74-1-PC9	212	297	519.1	26.1	3.84	0.80
74-1-PC9	213	332	536.2	26.3	3.65	0.81
74-1-PC9	214	367	523.9	25.9	4.00	0.88
74-1-PC9	215	407	523.5	25.8	4.10	0.93
74-1-PC9	216	447	517.6	25.4	4.13	0.78
74-1-PC9	217	487	517.7	25.4	3.33	0.90
74-1-PC9	218	527	537.0	26.0	4.05	0.96
74-1-PC9	219	562	514.8	24.8	2.82	0.64
74-1-PC9	220	592	520.6	25.0	4.31	0.82

SO226/2-75-2-PC9

Core	Sample ID	Sample Depth (cmbsf)	Cl^- (mM)	SO_4^{2-} (mM)	DIC (mM)	CH_4 (ppm)
75-2-PC9	221	5	532.7	27.4	2.22	0.19
75-2-PC9	222	25	529.7	26.9	3.87	0.27
75-2-PC9	223	35	522.0	26.4	2.60	0.29
75-2-PC9	224	45	524.4	26.4	ND	BLD
75-2-PC9	225	64	526.6	26.2	ND	0.40
75-2-PC9	226	74	531.2	26.3	3.44	0.19
75-2-PC9	227	84	527.9	26.0	3.53	0.42
75-2-PC9	228	94	528.0	25.8	3.62	0.51
75-2-PC9	229	104	522.5	25.5	3.99	0.38
75-2-PC9	230	114	532.0	25.8	3.94	0.52
75-2-PC9	231	124	534.4	25.8	4.08	0.49
75-2-PC9	232	144	525.5	25.1	4.43	0.61
75-2-PC9	233	164	535.4	25.4	4.67	0.63
75-2-PC9	234	184	530.1	24.7	5.44	0.66
75-2-PC9	235	204	535.3	24.7	5.24	0.79
75-2-PC9	236	224	525.4	24.0	5.48	0.79
75-2-PC9	237	249	525.9	23.6	5.97	0.92
75-2-PC9	238	284	531.3	23.2	6.26	0.95
75-2-PC9	239	314	530.7	22.6	7.11	1.01
75-2-PC9	240	344	526.0	21.8	8.12	1.01
75-2-PC9	241	380	529.6	21.2	8.35	1.07
75-2-PC9	242	415	527.0	20.7	8.67	1.16
75-2-PC9	243	455	525.8	20.0	9.58	1.08
75-2-PC9	244	495	515.1	18.9	9.70	1.16
75-2-PC9	245	535	507.2	17.9	10.45	1.23
75-2-PC9	246	575	517.6	17.5	10.71	1.23
75-2-PC9	247	620	529.9	17.1	12.13	1.18

SO226/2-76-1-PC9

Core	Sample ID	Sample Depth (cmbsf)	Cl^- (mM)	SO_4^{2-} (mM)	DIC (mM)	CH_4 (ppm)
76-1-PC9	248	5	519.2	26.9	1.23	0.02
76-1-PC9	249	15	512.8	26.4	1.53	0.12
76-1-PC9	250	25	519.7	26.8	1.53	0.24
76-1-PC9	251	58	524.5	26.8	2.35	0.23
76-1-PC9	252	68	522.2	26.5	2.92	0.25
76-1-PC9	253	88	525.1	26.6	2.36	0.29
76-1-PC9	254	108	522.3	26.3	ND	0.35
76-1-PC9	255	128	520.8	26.1	ND	0.24
76-1-PC9	256	148	520.1	25.9	3.53	0.39
76-1-PC9	257	168	519.8	25.8	3.49	0.47
76-1-PC9	258	193	524.1	25.9	3.55	0.44
76-1-PC9	259	213	524.4	25.9	3.59	0.55
76-1-PC9	260	233	524.3	25.6	4.12	0.50
76-1-PC9	261	263	520.4	25.2	3.96	0.55
76-1-PC9	262	293	525.4	25.2	4.40	0.55
76-1-PC9	263	323	517.4	24.6	7.03	0.55
76-1-PC9	264	363	523.1	24.7	4.91	0.64
76-1-PC9	265	388	526.2	24.7	4.81	0.65
76-1-PC9	266	423	525.9	24.6	5.02	0.80
76-1-PC9	267	458	527.3	24.5	4.89	0.68
76-1-PC9	268	498	526.4	24.3	5.26	0.84
76-1-PC9	269	538	523.0	24.0	5.45	BLD
76-1-PC9	270	578	522.5	24.1	4.74	0.70
76-1-PC9	271	623	520.3	23.8	5.11	0.61

SO226/2-77-2-PC9

Core	Sample ID	Sample Depth (cmbsf)	Cl^- (mM)	SO_4^{2-} (mM)	DIC (mM)	CH_4 (ppm)
77-2-PC9	272	5	529.1	27.3	ND	0.01
77-2-PC9	273	15	506.4	26.1	ND	0.06
77-2-PC9	274	28	532.0	27.3	ND	0.05
77-2-PC9	275	38	513.6	26.2	3.14	BLD
77-2-PC9	276	48	509.5	26.2	2.63	0.18
77-2-PC9	277	68	523.8	26.5	2.84	0.25
77-2-PC9	278	88	525.8	26.4	2.71	0.34
77-2-PC9	279	108	525.9	26.2	3.11	0.29
77-2-PC9	280	128	520.7	25.8	2.93	0.41
77-2-PC9	281	148	514.9	25.4	ND	0.40
77-2-PC9	282	173	515.5	25.3	3.28	0.37
77-2-PC9	283	208	514.3	25.0	3.59	0.50
77-2-PC9	284	238	506.2	24.2	4.75	0.51
77-2-PC9	285	268	520.7	24.8	4.06	0.58
77-2-PC9	286	303	526.8	24.7	4.41	0.70
77-2-PC9	287	343	522.9	24.4	4.31	0.76
77-2-PC9	288	373	524.0	24.3	4.19	0.73
77-2-PC9	289	403	524.3	24.1	4.06	0.81
77-2-PC9	290	438	523.3	24.0	4.52	0.92
77-2-PC9	291	478	511.2	23.2	4.66	0.88
77-2-PC9	292	518	519.1	23.4	4.47	1.02
77-2-PC9	293	558	517.7	23.1	5.11	1.06
77-2-PC9	294	603	520.2	23.1	4.85	0.80

SO226/2-82-3-PC9

Core	Sample ID	Sample Depth (cmbsf)	Cl^- (mM)	SO_4^{2-} (mM)	DIC (mM)	CH_4 (ppm)
82-3-PC9	295	25	516.2	26.6	2.29	0.06
82-3-PC9	296	35	517.7	26.6	2.43	0.22
82-3-PC9	297	45	521.2	26.9	2.22	0.11
82-3-PC9	298	55	520.8	26.8	2.38	0.12
82-3-PC9	299	65	523.0	26.9	2.35	0.10
82-3-PC9	300	75	520.5	26.8	2.31	0.10
82-3-PC9	301	90	507.9	26.2	2.43	0.09
82-3-PC9	302	110	522.2	26.9	2.36	0.16
82-3-PC9	303	130	521.6	26.8	2.46	0.17
82-3-PC9	304	150	514.9	26.5	2.55	0.12
82-3-PC9	305	170	525.9	27.1	2.50	0.16
82-3-PC9	306	190	523.6	26.9	2.52	0.16
82-3-PC9	307	210	527.5	27.1	2.33	0.16
82-3-PC9	308	230	525.0	26.8	2.61	0.17
82-3-PC9	309	250	525.1	27.0	2.86	0.22
82-3-PC9	310	270	523.3	26.7	2.85	0.29
82-3-PC9	311	290	525.6	26.5	3.40	0.35
82-3-PC9	312	310	520.9	26.3	3.15	0.43
82-3-PC9	313	340	522.8	26.1	3.56	0.48
82-3-PC9	314	370	524.0	25.8	4.16	0.54
82-3-PC9	315	400	520.9	25.1	4.27	0.63
82-3-PC9	316	430	513.2	24.3	4.96	0.72
82-3-PC9	317	460	507.3	23.6	5.50	0.70
82-3-PC9	318	500	525.3	23.8	6.11	0.78
82-3-PC9	319	550	517.7	22.9	5.70	0.82
82-3-PC9	320	600	528.9	22.9	ND	BLD

SO226/2-83-1-PC9

Core	Sample ID	Sample Depth (cmbsf)	Cl^- (mM)	SO_4^{2-} (mM)	DIC (mM)	CH_4 (ppm)
83-1-PC9	321	5	508.6	26.2	1.88	0.19
83-1-PC9	322	20	517.6	26.7	1.80	0.21
83-1-PC9	323	35	509.8	26.3	2.07	0.19
83-1-PC9	324	45	513.7	26.4	2.28	0.14
83-1-PC9	325	55	522.4	26.8	2.24	0.12
83-1-PC9	326	75	517.0	26.6	2.45	BLD
83-1-PC9	327	95	515.2	26.5	2.45	0.26
83-1-PC9	328	115	518.2	26.6	2.43	0.30
83-1-PC9	329	140	523.8	26.8	2.54	0.32
83-1-PC9	330	155	513.0	26.4	2.41	0.25
83-1-PC9	331	165	508.0	26.1	2.59	0.32
83-1-PC9	332	175	511.6	26.2	2.49	0.29
83-1-PC9	333	185	519.9	26.7	2.59	0.21
83-1-PC9	334	195	522.4	26.7	2.58	0.23
83-1-PC9	335	205	522.7	26.8	2.63	0.30
83-1-PC9	336	215	521.0	26.6	2.67	0.31
83-1-PC9	337	240	518.7	26.4	2.76	0.33
83-1-PC9	338	265	523.0	26.7	2.76	0.37
83-1-PC9	339	285	525.5	26.6	2.91	0.32
83-1-PC9	340	315	513.8	25.7	2.91	0.34
83-1-PC9	341	355	520.3	25.9	3.32	0.39
83-1-PC9	342	395	517.7	25.7	3.24	0.44
83-1-PC9	343	435	490.8	24.5	3.64	0.43
83-1-PC9	344	475	518.7	25.7	3.71	0.58
83-1-PC9	345	515	517.3	25.4	3.75	0.56
83-1-PC9	346	555	511.7	25.0	3.98	0.63
83-1-PC9	347	595	514.6	25.0	4.26	0.65
83-1-PC9	348	620	484.8	23.5	4.11	0.65

SO226/2-84-1-PC9

Core	Sample ID	Sample Depth (cmbsf)	Cl^- (mM)	SO_4^{2-} (mM)	DIC (mM)	CH_4 (ppm)
84-1-PC9	349	10	506.4	26.1	2.54	0.13
84-1-PC9	350	25	519.8	26.7	2.50	0.10
84-1-PC9	351	45	513.5	26.4	2.27	0.17
84-1-PC9	352	62	523.4	27.0	2.56	0.15
84-1-PC9	353	87	517.8	26.6	2.30	0.19
84-1-PC9	354	107	522.7	26.9	2.35	0.17
84-1-PC9	355	127	516.6	26.6	2.63	0.23
84-1-PC9	356	147	531.9	27.4	2.42	0.27
84-1-PC9	357	162	517.8	26.7	2.36	0.22
84-1-PC9	358	172	524.7	27.0	2.29	0.20
84-1-PC9	359	182	528.9	27.3	2.55	0.15
84-1-PC9	360	192	513.1	26.5	2.49	0.21
84-1-PC9	361	202	520.8	26.8	2.42	0.29
84-1-PC9	362	212	526.5	27.1	2.48	0.28
84-1-PC9	363	222	518.4	26.7	2.64	0.24
84-1-PC9	364	232	509.0	26.2	2.57	0.26
84-1-PC9	365	242	510.7	26.2	2.64	0.21
84-1-PC9	366	252	511.6	26.2	2.56	0.35
84-1-PC9	367	277	506.6	25.9	2.90	0.27
84-1-PC9	368	302	515.6	26.0	3.12	0.45
84-1-PC9	369	337	513.5	25.5	3.53	0.56
84-1-PC9	370	382	507.7	24.8	4.15	0.66
84-1-PC9	371	422	524.1	25.2	4.33	0.77
84-1-PC9	372	462	520.4	24.7	4.84	0.68
84-1-PC9	373	502	519.9	24.3	4.92	0.79
84-1-PC9	374	542	519.6	23.9	5.27	0.78
84-1-PC9	375	582	517.9	23.5	5.25	0.87
84-1-PC9	376	632	520.3	23.3	5.57	0.89

SO226/2-85-2-PC9

Core	Sample ID	Sample Depth (cmbsf)	Cl^- (mM)	SO_4^{2-} (mM)	DIC (mM)	CH_4 (ppm)
85-2-PC9	377	5	527.9	27.3	1.95	0.20
85-2-PC9	378	25	523.0	27.0	2.16	0.28
85-2-PC9	379	35	529.0	27.2	ND	0.18
85-2-PC9	380	45	549.1	28.1	2.39	0.31
85-2-PC9	381	63	529.3	27.0	2.35	0.31
85-2-PC9	382	83	523.2	25.9	3.30	0.36
85-2-PC9	383	103	518.0	26.2	2.63	BLD
85-2-PC9	384	113	535.2	27.0	3.02	0.36
85-2-PC9	385	143	525.4	26.3	3.12	0.40
85-2-PC9	386	163	527.1	26.3	3.32	0.38
85-2-PC9	387	183	521.9	26.5	2.62	0.46
85-2-PC9	388	223	520.4	25.5	3.32	0.49
85-2-PC9	389	253	530.8	25.8	4.13	0.52
85-2-PC9	390	283	526.3	25.5	4.04	0.42
85-2-PC9	391	313	526.5	25.3	4.11	0.52
85-2-PC9	392	343	523.0	25.0	4.12	0.56
85-2-PC9	393	383	520.7	24.7	4.66	0.65
85-2-PC9	394	423	523.1	24.6	3.99	0.55
85-2-PC9	395	463	524.7	24.5	4.20	0.72
85-2-PC9	396	503	532.2	24.7	4.72	0.82
85-2-PC9	397	543	532.0	24.5	4.83	0.90
85-2-PC9	398	583	529.8	24.3	5.16	0.79
85-2-PC9	399	633	530.9	24.1	4.92	0.58

SO226/2-94-5-PC9

Core	Sample ID	Sample Depth (cmbsf)	Cl^- (mM)	SO_4^{2-} (mM)	DIC (mM)	CH_4 (ppm)
94-5-PC9	400	10	515.1	26.5	2.24	0.17
94-5-PC9	401	25	518.9	26.7	2.27	0.23
94-5-PC9	402	35	499.8	25.7	2.45	0.19
94-5-PC9	403	45	527.4	27.1	2.38	0.20
94-5-PC9	404	58	526.5	27.1	2.36	0.12
94-5-PC9	405	68	524.6	26.9	2.54	0.06
94-5-PC9	406	78	529.1	27.2	2.51	0.14
94-5-PC9	407	88	525.2	27.0	2.74	0.13
94-5-PC9	408	98	519.1	26.6	2.66	0.13
94-5-PC9	409	118	526.7	27.0	2.54	0.17
94-5-PC9	410	138	524.4	26.9	2.61	0.23
94-5-PC9	411	158	529.1	27.1	2.66	0.15
94-5-PC9	412	178	525.4	26.8	2.50	0.21
94-5-PC9	413	198	522.6	26.8	2.88	0.03
94-5-PC9	414	218	517.6	26.4	2.57	0.19
94-5-PC9	415	238	522.9	26.7	2.69	0.19
94-5-PC9	416	263	521.8	26.7	2.65	0.09
94-5-PC9	417	298	517.8	26.5	2.75	0.06
94-5-PC9	418	333	526.1	27.0	2.71	0.07
94-5-PC9	419	368	521.2	26.6	2.55	0.07
94-5-PC9	420	403	510.4	26.2	2.60	0.69
94-5-PC9	421	433	523.6	26.8	2.77	0.12
94-5-PC9	422	463	523.7	26.7	2.91	0.15
94-5-PC9	423	493	519.2	26.2	2.91	0.27
94-5-PC9	424	523	522.7	26.2	3.30	0.38
94-5-PC9	425	553	520.9	25.8	3.50	0.38
94-5-PC9	426	588	514.1	25.1	3.64	0.60
94-5-PC9	427	633	524.1	24.7	4.64	0.73

SO226/2-95-1-PC9

Core	Sample ID	Sample Depth (cmbsf)	Cl^- (mM)	SO_4^{2-} (mM)	DIC (mM)	CH_4 (ppm)
95-1-PC9	428	10	513.1	26.4	2.48	0.11
95-1-PC9	429	30	519.0	26.7	2.56	0.13
95-1-PC9	430	50	520.5	26.7	2.61	0.05
95-1-PC9	431	70	528.0	27.1	2.50	BLD
95-1-PC9	432	90	523.6	27.0	2.64	0.12
95-1-PC9	433	110	530.6	27.3	2.63	0.16
95-1-PC9	434	142	517.4	26.6	2.65	0.16
95-1-PC9	435	172	523.7	26.8	2.79	0.17
95-1-PC9	436	202	525.4	26.9	2.70	0.22
95-1-PC9	437	232	513.9	26.2	2.78	0.21
95-1-PC9	438	262	520.6	26.5	4.23	0.21
95-1-PC9	439	292	522.9	26.6	2.75	0.24
95-1-PC9	440	317	514.1	26.6	2.88	0.21
95-1-PC9	441	337	517.8	26.6	2.71	0.22
95-1-PC9	442	357	508.6	26.1	2.90	0.16
95-1-PC9	443	377	508.8	26.4	1.28	0.10
95-1-PC9	444	392	518.7	26.8	2.77	0.02
95-1-PC9	445	402	508.2	26.2	2.71	0.17
95-1-PC9	446	417	517.6	26.7	2.64	0.63

SO226/2-96-1-PC9

Core	Sample ID	Sample Depth (cmbsf)	Cl^- (mM)	SO_4^{2-} (mM)	DIC (mM)	CH_4 (ppm)
96-1-PC9	447	10	511.1	26.3	2.45	0.24
96-1-PC9	448	30	528.1	27.2	2.49	0.48
96-1-PC9	449	50	527.4	27.0	2.64	0.47
96-1-PC9	450	65	519.2	26.6	2.65	0.40
96-1-PC9	451	75	524.4	26.9	2.69	0.32
96-1-PC9	452	90	524.4	26.9	2.70	0.30
96-1-PC9	453	110	525.0	27.0	2.49	0.24
96-1-PC9	454	130	514.5	26.4	2.73	0.32
96-1-PC9	455	145	526.8	27.1	2.54	0.22
96-1-PC9	456	155	522.5	26.9	2.66	0.26
96-1-PC9	457	175	523.2	26.9	2.51	0.16
96-1-PC9	458	205	510.4	26.3	2.59	0.98
96-1-PC9	459	235	524.3	27.1	2.57	0.09
96-1-PC9	460	265	524.6	27.0	2.38	0.16
96-1-PC9	461	297	514.8	26.5	2.60	0.21
96-1-PC9	462	327	525.7	27.0	2.52	0.18
96-1-PC9	463	357	522.3	26.9	2.68	0.16
96-1-PC9	464	387	521.5	26.8	2.37	0.19
96-1-PC9	465	417	513.9	26.6	2.43	0.27
96-1-PC9	466	447	521.4	26.8	2.72	0.23
96-1-PC9	467	477	520.7	26.6	2.99	0.33
96-1-PC9	468	507	517.9	26.4	3.10	0.44
96-1-PC9	469	537	546.1	27.8	3.15	0.52
96-1-PC9	470	562	523.3	26.6	3.65	0.53

SO226/2-97-1-PC9

Core	Sample ID	Sample Depth (cmbsf)	Cl^- (mM)	SO_4^{2-} (mM)	DIC (mM)	CH_4 (ppm)
97-1-PC9	471	0	507.2	26.3	2.17	0.21
97-1-PC9	472	25	528.3	27.3	2.22	0.21
97-1-PC9	473	45	511.3	26.2	2.61	0.19
97-1-PC9	474	65	521.4	26.8	2.44	0.18
97-1-PC9	475	85	524.4	26.9	2.70	0.19
97-1-PC9	476	110	521.0	26.7	2.42	0.20
97-1-PC9	477	143	521.1	26.6	3.93	0.16
97-1-PC9	478	173	521.4	26.7	2.55	0.17
97-1-PC9	479	203	520.9	26.6	2.58	0.18
97-1-PC9	480	233	523.3	26.8	2.63	0.24
97-1-PC9	481	263	520.8	26.7	2.87	0.24
97-1-PC9	482	283	540.9	27.7	2.72	0.16
97-1-PC9	483	303	520.4	26.6	2.61	BLD
97-1-PC9	484	328	525.9	26.9	2.82	0.20
97-1-PC9	485	348	523.0	26.8	2.72	0.20
97-1-PC9	486	368	526.3	27.0	ND	0.23
97-1-PC9	487	388	525.7	27.0	2.69	0.17
97-1-PC9	488	408	527.0	27.0	2.38	0.15

SO226/2-98-1-PC9

Core	Sample ID	Sample Depth (cmbsf)	Cl^- (mM)	SO_4^{2-} (mM)	DIC (mM)	CH_4 (ppm)
98-1-PC9	489	10	710.4	36.6	1.81	0.97
98-1-PC9	490	25	789.9	41.8	2.15	0.79
98-1-PC9	491	45	813.8	43.6	1.91	0.33
98-1-PC9	492	70	739.9	39.4	2.57	0.22
98-1-PC9	493	105	524.5	27.1	2.51	0.16
98-1-PC9	494	135	523.0	27.0	2.50	0.16
98-1-PC9	495	155	519.5	26.7	2.74	0.17
98-1-PC9	496	175	525.4	27.0	2.73	0.15
98-1-PC9	497	195	527.3	27.1	2.76	0.29
98-1-PC9	498	215	524.2	27.0	2.81	0.25
98-1-PC9	499	235	526.8	27.1	2.70	0.28
98-1-PC9	500	255	529.0	27.2	2.96	0.29
98-1-PC9	501	280	527.4	27.1	3.05	0.27
98-1-PC9	502	306	519.7	26.7	2.98	0.27
98-1-PC9	503	321	524.6	26.9	3.04	0.31
98-1-PC9	504	341	524.5	26.8	3.17	0.40
98-1-PC9	505	366	524.7	26.7	3.47	0.30
98-1-PC9	506	401	524.7	26.7	3.47	0.18
98-1-PC9	507	426	526.2	26.7	3.78	0.30
98-1-PC9	508	456	526.3	26.6	3.63	0.29
98-1-PC9	509	486	521.8	26.4	3.74	0.31
98-1-PC9	510	516	526.3	26.6	3.80	0.37
98-1-PC9	511	541	568.5	29.9	4.09	0.37
98-1-PC9	512	566	705.7	39.8	3.48	0.71

Appendix 4: Sample Summary

Total number of samples collected from the piston cores. Samples for carbon and nitrogen concentration and stable isotope abundance, ^{230}Th and ^{231}Pa analyses will be subsampled from the sediment porosity jars at NRL.

	Sed CH_4	Sed Porosity	Sed C-14	Sed Pb-210	PW SO_4 + Cl	PW DIC	$\delta^{13}C$ DIC	PW DOC	PW Sulfide 1000 µL	PW Sulfide 250 µL	PW Sulfide 25 µL	PW Archive
SO226/2-030-2-PC9	19	19	19	19	19	19	19	19	19	19	19	19
SO226/2-033-1-PC9	11	12	12	12	12	12	12	12	12	12	12	12
SO226/2-044-1-PC9	21	21	21		21	21	21	21	21	21	21	21
SO226/2-045-2-PC9	25	25	25	25	25	25	25	25	25	25	25	25
SO226/2-047-1-PC9			1									
SO226/2-051-2-PC9	23	23	23		23	23	23	23	23	23	23	23
SO226/2-052-1-PC9	23	23	23		23	23	23	23	23	23	23	23
SO226/2-053-1-PC9	25	25	25		25	25	25	25	25	25	25	25
SO226/2-054-1-PC9	27	27	27		27	27	27	27	27	27	27	27
SO226/2-073-2-PC9	21	21	21		21	21	21	21	21	21	21	21
SO226/2-074-1-PC9	24	24	24		24	24	24	24	24	24	24	24
SO226/2-075-2-PC9	27	27	27	27	27	27	27	27	27	27	27	27
SO226/2-076-2-PC9	24	24	24		24	24	24	24	24	24	24	24
SO226/2-077-2-PC9	23	23	23	23	23	23	23	23	23	23	23	23
SO226/2-082-3-PC9	26	26	26		26	26	26	26	26	26	26	26
SO226/2-083-1-PC9	28	28	28		28	28	28	28	28	28	28	28
SO226/2-084-1-PC9	28	28	28		28	28	28	28	28	28	28	28
SO226/2-085-2-PC9	23	23	23	23	23	23	23	23	23	23	23	23
SO226/2-094-5-PC9	28	28	28	28	28	28	28	28	28	28	28	28
SO226/2-095-1-PC9	19	19	19		19	19	19	19	19	19	19	19
SO226/2-096-1-PC9	24	24	24		24	24	24	24	24	24	24	24
SO226/2-097-1-PC9	18	18	18		18	18	18	18	18	18	18	18
SO226/2-098-1-PC9	24	24	24	24	24	24	24	24	24	24	24	24
SO226/2-100-1-PC9	12	12	12	12	12	12	12	12	12	12	12	12
total	523	524	525	193	524	524	524	524	524	524	524	524

Total number of samples collected from the multicores. Samples for carbon and nitrogen concentration and stable isotope abundance, ^{230}Th and ^{231}Pa analyses will be subsampled from the sediment porosity jars at NRL.

	Sed Porosity	Sed C-14	Sed Pb-210
SO226/2-037-1-MUC	13	13	13
SO226/2-038-1-MUC	8	8	
SO226/2-039-1-MUC	39	39	39
SO226/2-040-1-MUC	13	13	
SO226/2-041-1-MUC	22	22	22
SO226/2-042-1-MUC	13	13	
SO226/2-048-1-MUC	22	22	
SO226/2-049-1-MUC	25	25	
SO226/2-050-1-MUC	34	34	
SO226/2-051-1-MUC	12	12	
SO226/2-061-1-MUC	35	35	
SO226/2-063-1-MUC	35	35	
SO226/2-068-1-MUC	34	34	34
SO226/2-069-1-MUC	15	15	
SO226/2-071-1-MUC	16	16	16
SO226/2-072-1-MUC	11	11	
SO226/2-073-1-MUC	16	16	
SO226/2-079-1-MUC	42	42	42
SO226/2-080-2-MUC	20	20	
SO226/2-081-1-MUC	27	27	27
SO226/2-082-2-MUC	28	28	
SO226/2-090-1-MUC	22	22	22
SO226/2-091-1-MUC	36	36	36
SO226/2-092-1-MUC	22	22	
SO226/2-093-1-MUC	41	41	
SO226/2-101-2-MUC	23	23	23
SO226/2-102-1-MUC	18	18	18
SO226/2-103-1-MUC	20	20	
SO226/2-104-1-MUC	38	38	38
total	700	700	330